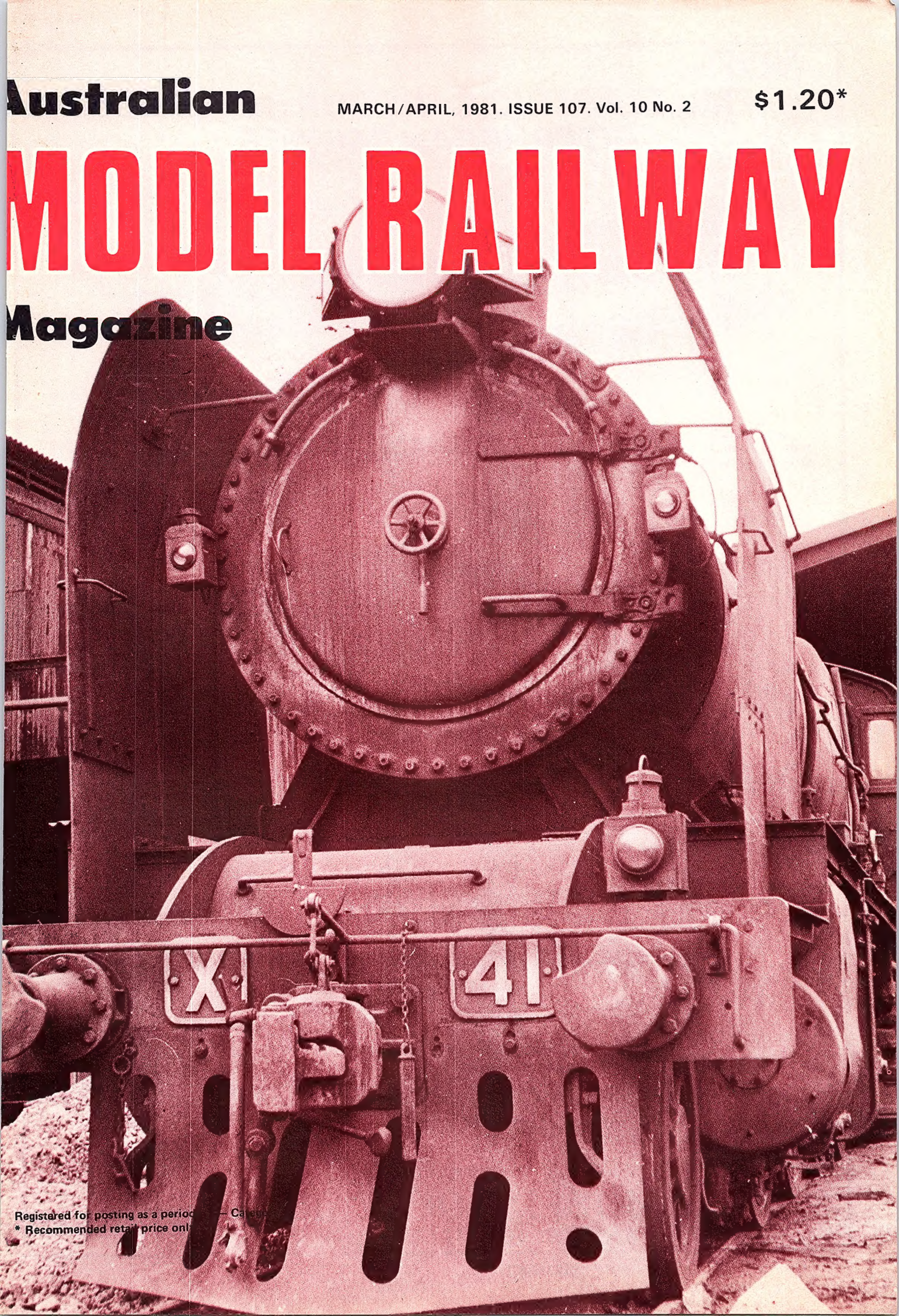
Australian

MARCH/APRIL, 1981. ISSUE 107. Vol. 10 No. 2

$1.20*

MODEL RAILWAY

Magazine



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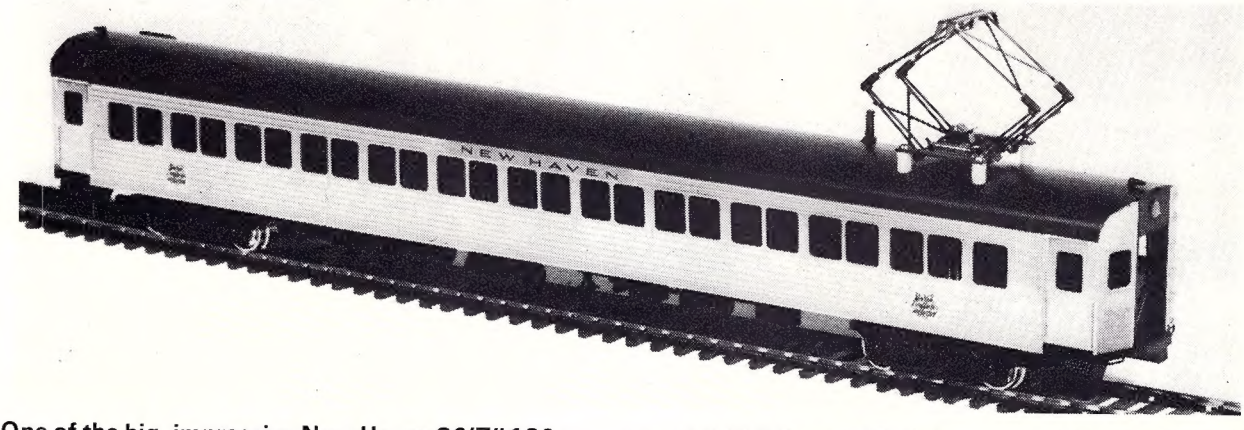
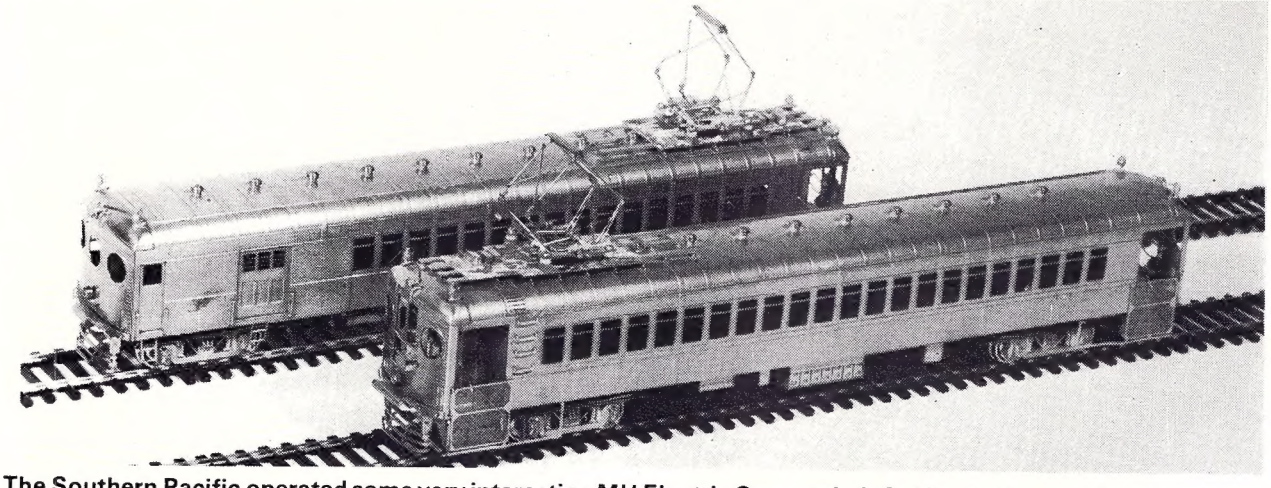
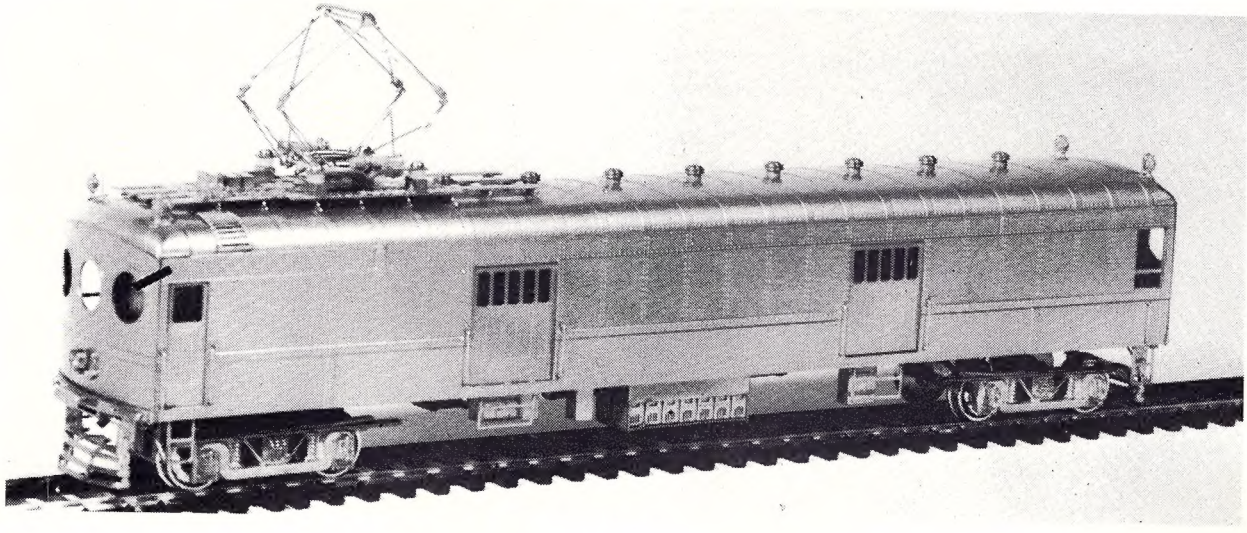
NEW!...
— MU ELECTRIC CARS FOR SUBURBAN & INTERURBAN SERVICE...



One of the big, impressive New Haven 86'7" 120 passenger AC/DC Cars of 1954 design. Modelled in HO by Custom Brass and one Car in a new 3-Car Multiple Unit Set, supplied ready for the road, finished and painted. All Cars equipped with pantographs. PRICE: $434.85 per set.



The Southern Pacific operated some very interesting MU Electric Cars on their Oakland, Alameda & Berkley lines. This network served the East Bay area of San Francisco and was known as the Interurban Electric Railway. Five models (1924/1938 configuration) are offered. The 300 Series 71' Coach, powered (shown above) @ $244.85 ea; the 300 Series 71' Coach, unpowered @ $206.65 ea; the matching 438 Series 71' Trailer Coach @ $193.25 ea; the 600 Series 67' Combine, powered (shown on rear track above) @ $244.85 ea. and the 700' Series Baggage Car, powered (shown below) @ $244. 85 ea. All Cars come with O.A. & B. decals included.



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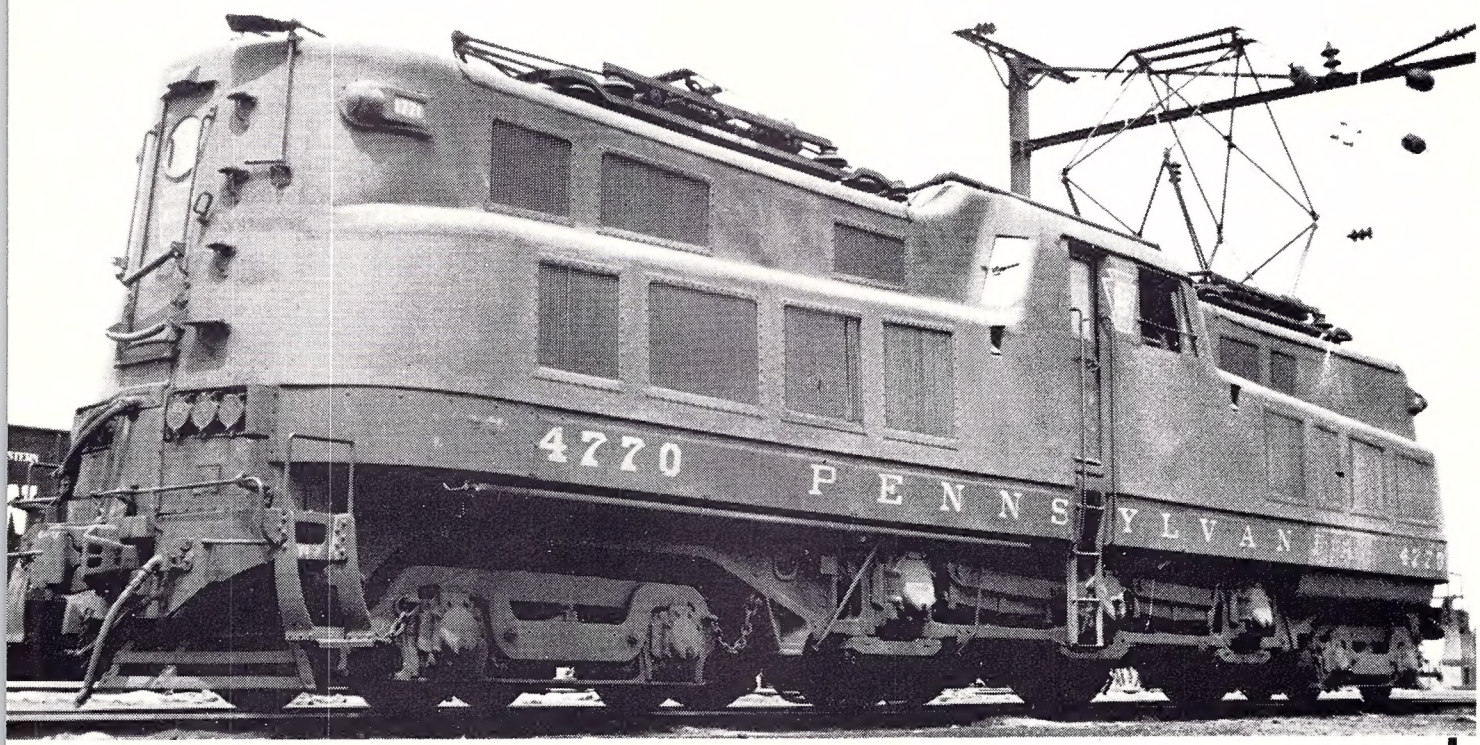
NEW!...
PENNSY 'P-5'S' FOR HEAVY ELECTRIC SERVICE...

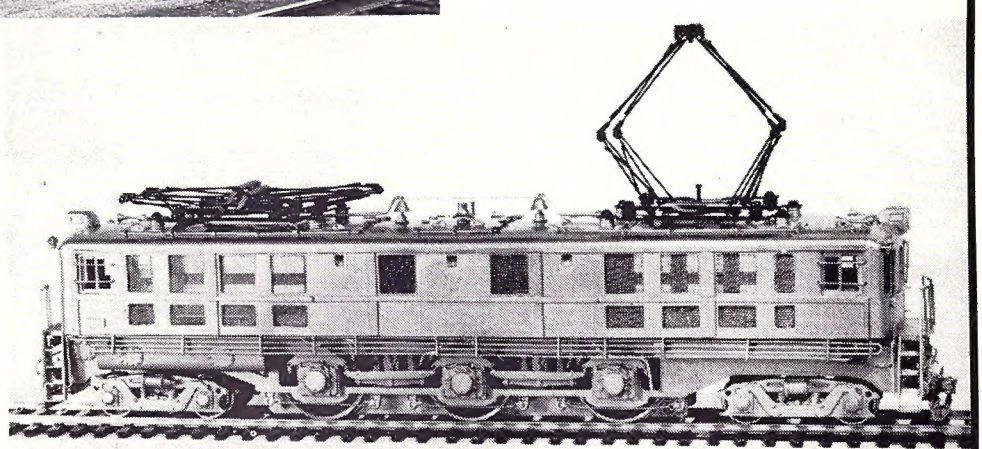


The P.R.R. 2-C-2 'P-5' Series Electric Locomotive came in a trio of variations, all now faithfully reproduced by ALCO MODELS in HO scale. The Standard 'P-5A' Locomotive is shown in the prototype view at left. Those Units modified with streamline superstructure appeared as in the prototype view above and were reclassified 'P-5A (M)'. Whilst the experimental 'P-5B' Version is depicted in the view of the model below. All Versions come powered by heavy duty 'can' motor, geared to all drivers. Insulated for 2-rail or overhead operation. PRICE: $214.50 EACH.

OTHER ARRIVALS NOW ON THE 'READY TRACK'...

HO Alco Models Virginian A + A 6000 H.P. G.E. Electric Locomotive (both Units powered) @ $692.00; HO Hallmark Models A.T. & S.F. EMD CF-7 Phase III Diesel Locomotive @ $332.50 ea; HO Hallmark Models A.T. & S.F. EMD CF-7 Phase V Diesel Locomotive @ $332.50 ea; HO Alco Models EMD GP-30 Diesel Loco., Standard version @ $312.50 ea; HO Alco Models EMD GP-30 Diesel Loco., Low Hood P.R.R. version @ $340.95 ea; HO Alco Models GP-30 Diesel Loco., High Hood version @ $312.50 ea; HO Alco Models GP-30 Diesel 'B' Unit, Powered U.P. version @ $312.50 ea; HO North Shore No. 458 4-Truck Electric Locomotive @ $351.35 ea;

Continued on page 4



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OTHER ARRIVALS
NOW ON
THE READY TRACK'. . .
Continued from page 3

HO South Shore Steeple Cab Electric Locomotive @ $289.00 ea; HO P.E. '1032' Series Wood Interurban Car, Painted @ $244.85 ea; HO P.E. '1362' Series Wood Interurban Combine, Painted @ $244.85 ea; HO Chicago Surface Lines 'Short' Brill Trolley Car @ $189.95 ea; I.T.S. '510-514' Series Interurban Parlor-Observation Car @ $260.00 ea. and I.T.S. '516-527' Series Interburban Coach @ $249.00 ea. STOP PRESS: By way of a special discount promotion, for the month of May we are offering 25% off the following 'O' scale brass models: 4-8-4 S.P. 'GS-4' Daylight Loco & Tender @ $980.00, F-45 Diesel Locomotive @ $580.00, 4-8-2 P.R.R. 'M-1' Loco. & Tender @ $975.00, G.N. 'Y-1' Electric Locomotive @ $1046.00, 0-4-0 Reading 'A5a' Camel-back Switcher & Tender @ $454.00, Alco 'S-1' Diesel Switcher @ $495.00, 2-8-2 B. & O. 'Q4b' Loco. & Tender @ $759.00 and 2-4-4-2 Baldwin Loco. & Tender @ $1665.00 Narrow gauge items include: On3 4-4-0 Baldwin Loco. & Tender @ $977.00, On3 16 Ton Tee Boiler Shay @ $850.00, On3 2-8-2 D. & R.G.W. 'K-27' No. 461 Loco. & Tender @ $1405.00, On3 D. & R.G.W. Short Caboose @ $175.85, On2 S.R. & R.L. No. 15 Combine @ $164.00 and On2 S.R. & R.L. No. 8 Baggage Car @ $206.95. Some items of 'O' gauge brass rolling stock will be included in the discount deal at the same time. Details on request. LATE NEWS: Due March are the HO Northern Pacific 'B-3' Gas-electric Car and HO Union Pacific 'Forty Niner' Passenger Car Set, by Oriental Limited; HO N.Y.C. 24' Wood Caboose by Alco Models and I.T.S. Interurban Sleeper Trailer, by Kumata.

The MODEL DOCKYARD Pty Ltd
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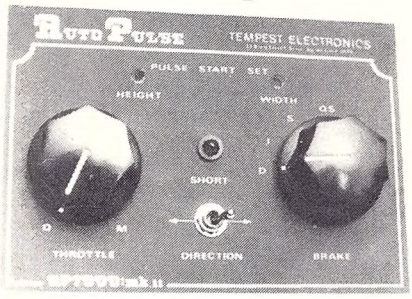

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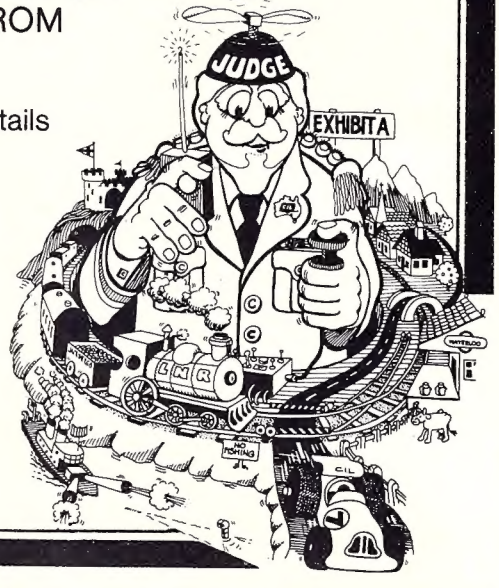

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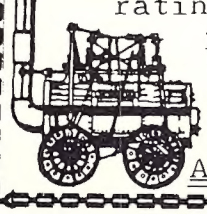

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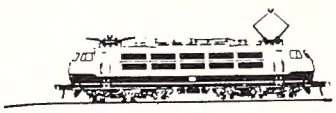

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DETAIL ASSOCIATES

NEW to our shelves from Detail Associates are two construction kits in HO.

7001 Branchline Roundhouse [3 stall]. A wood framed structure suitable for HO/HOn3 locomotives up to 50 feet long. Prototype is the Pacific Coast Railway narrow gauge roundhouse at San Luis Obispo, California. Kit features:- Die cut milled wood siding, Grandt plastic windows and stack vents, Campbell shingles, illustrated instructions and templates. $43.50

7002 Extra Stall for 7001 Roundhouse. Price $12.00

Expected in a few weeks is kit 7003 The Foothill Station, expected price is $52.50. This will be followed in July with kit 7004 The Ponderosa Tank, price should be under $30.00.

There are many new detailing items to be released by Detail Associates, in HO and N, during 1981. For a copy of the full list of over 230 Detail Associates items now in stock, please write. Also expected during 1981 is Detail Associates first plastic diesel - watch for details.

MODEL POWER BUILDING KITS

HO SCALE

402 Wells Fargo Office	$3.98
405 Assayer's Office	$3.98
406 Saloon	$4.45
407 Lumber Mill	$7.50
425 House with Garage	$7.50
426 Rooming House	$8.45
427 Station and Freight Shed	$8.45
430 Brick Residence	$6.50
431 Two Cottages	$6.50
432 Signal Tower Set	$6.50
433 Farm House	$8.45
434 Hunter's Log Cabin	$4.75
435 Old Storage Shed	$4.75
436 Lumber Shed	$4.75
437 Three Trackside Buildings	$6.50
438 Ranger Lookout Station	$4.75
439 Fisherman's Cabin	$4.75
440 Branch Line Depot	$6.50
444 Country Freight Station	$8.45
445 Two Story Foundry	$8.45
446 Modern Ranch House	$6.50
447 Two Story Modern Home	$6.50

N SCALE

1501 Combination Station	$6.50
1502 Three Suburban Houses	$8.45
1503 Exxon Service Station	$6.45
1509 Factory with Smoke Stack	$8.45
1510 Star Journal Building	$6.50
1511 Fire House w/Fire Engine	$6.50
1512 Railroad Hotel	$6.50
1513 Farmhouse	$6.50
1514 Two Story Building	$8.45
1515 Railroad Junction Set [Signal Box, Water Tower and Station]	$8.45
1516 Church	$8.45
1517 Barn and Silo	$8.45

Model Power kits are moulded in 4 colours, in plastic and in West Germany. Where included, signs are in English.

BACHMANN

Some of the new Bachmann items announced in 1980 are now in stock.

HO SCALE

2-10-4 Texan Loco and Tender, with "smoke and sound". AT&SF $127.20

2-8-0 Consolidation with "smoke" in Santa Fe. $61.50

2-8-2 Mikado with Vanderbuilt Tender, "smoke" in B and O $75.50

0-6-0 USRA Switcher with slope back Tender with "smoke" in Santa Fe and PRR. $45.98

PLASSER Track Geometry Testing Diesel [also a track cleaner] in AMTRAK and UP. $26.98

E60CP Electric in AMTRAK $35.00

Operating Hand Car, complete with moving figures. $18.98

Trackster - Lighted Track Inspection Car, Jeepster or Ford Van. $8.50

N SCALE

4-4-0 American Loco and Tender in Central Pacific "Jupiter" and #119 Union Pacific. $29.98

0-4-0 Dockside Loco in B and O and SantaFe. $22.65

0-6-0 USRA Loco with slope back Tender in PRR and Santa Fe. $26.98

4-8-4 Northern Loco with Tender in Santa Fe. $49.95

TROLLER CORPORATION

MODEL 2000 TRANSCAB. Hand held controller with 3 metres of cable. Transistorised. Overload and track voltage monitor. May be connected to any AC accessory power supply. Use low voltage 8-20V isolated power source for common return compatability. $27.95

MODEL 3000 TRANSPAK 2.5. Transistorised transformer controller. Overload and track voltage monitor. Input 240 volts AC. Output 12 volts DC controlled, 12 volts DC uncontrolled and 16 volts AC uncontrolled. $49.25

MODEL 5501 TWIN TRANSPAK 5. Dual control transistorised transformer. Overload and track voltage monitors. Two independent transformers. Input 240 volts AC. Output two 12 volts DC controlled, 12 volts DC uncontrolled and 16 volts AC uncontrolled. $84.95

Models 2000 and 3000 each have a current capacity of 2.5 amps while model 5501 has a total capacity of 5 amps. TROLLER CONTROLLERS use a transistorised design called AUTOPULSE®. The "pulse power" switch required by many other controllers is made obsolete by TROLLER'S autopulse. The overload monitor indicates short circuits and overheating problems. It is automatic and will reset once the problem has been eliminated. The Track Voltage Monitor is a variable brightness light which indicates relative voltage without meters - can be useful for locating operational problems.

TRAX AUSTRALIAN MODELS HO

The following TRAX kits are now in stock.

LCH 4 wheel coal hopper	$5.95
S 4 wheel waggon	$4.95
TRC Bogie refrigerated van	$5.95
LCH/CCH Decal sheet	$1.00

TRAX kits DO NOT include wheels, bogies, decals or couplers.

MnJ DECALS

Two new releases from MnJ are sheet No. 5303 SAR emblems in red $1.00

No. 5304 SAR enblems in black $1.00

There are 4 large and 4 small HO emblems per sheet. We carry the full range of MnJ Australian decals in HO and N, a full list is available on request.

NORTH YARD WHEELSETS HO

Suitable for use with most of the fine Australian prototype kits now available are NORTH YARD'S 10.5mm, 10 spoke HO wheelsets at 70 cents per axle. Wheelsets have needlepoint axles, blackened brass "tyres" and plastic spokes.

FYBREN MODELS N

VR ELX bogie waggon kit in N scale. Injection moulded in high impact styrene for excellent detail. Kit includes VR decals. With bogies $6.85 and without bogies $5.00.

WEICO MODELS N

VR "AS" Carriage kit, as used in the "Spirit of Progress" consist, in N scale. The body is pre-formed to shape, painted, photo-etched aluminium. Details are white metal castings. Price $13.45

Matching paint is HUMBROL Midnight Blue at 69 cents per tinlet. Suitable decal is MnJ No. 020 at $1.00. Couplers of your choice are required to complete this model. [For a review of this item see page 41 of the Jan/Feb 1981 AMRM].

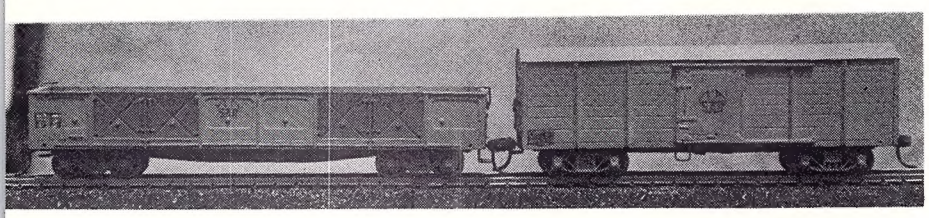
Expected from WEICO over the next few weeks are a 5 piece metal body kit of a VR S Class diesel and the VR Spirit of Progress dining car.

PLASTRUCT

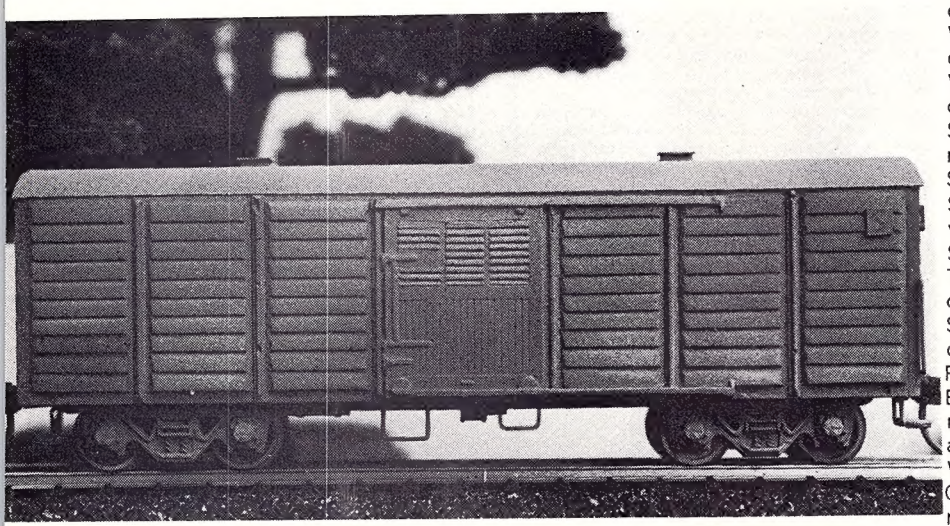
Plastic Scale Structural Shapes and Components. PLASTRUCT is ABS plastic, precision injection moulded, or extruded. Can be sawn, blade-cut, drilled, sanded. Can be brush or spray painted with Floquil laquer or Polly S water based paint or Humbrol enamels. Available in angles, beams, channels or tees and in square, round or rectangular tubing. Also available are stairs, ladders, rails, pipe fittings etc. PLASTRUCT is perfect for use with our range of Evergreen Scale Models plastic strips and siding. A new PLASTRUCT Catalogue has just been released which includes a number of new items including clear acrylic shapes and rods.

PLASTRUCT Catalogue, prices	$1.25
PlastiWeld liquid cement	$2.25

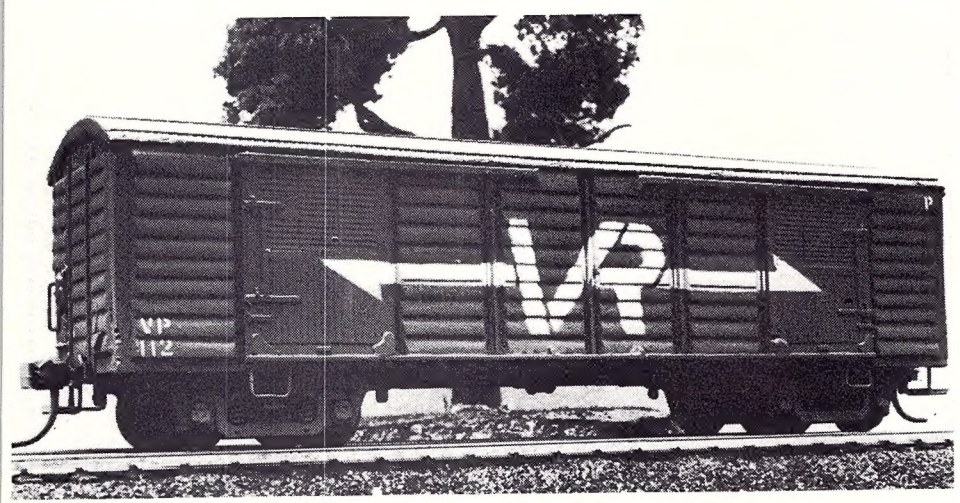
EW RELEASES OF AUSTRALIAN PROTOTYPE - HO SCALE



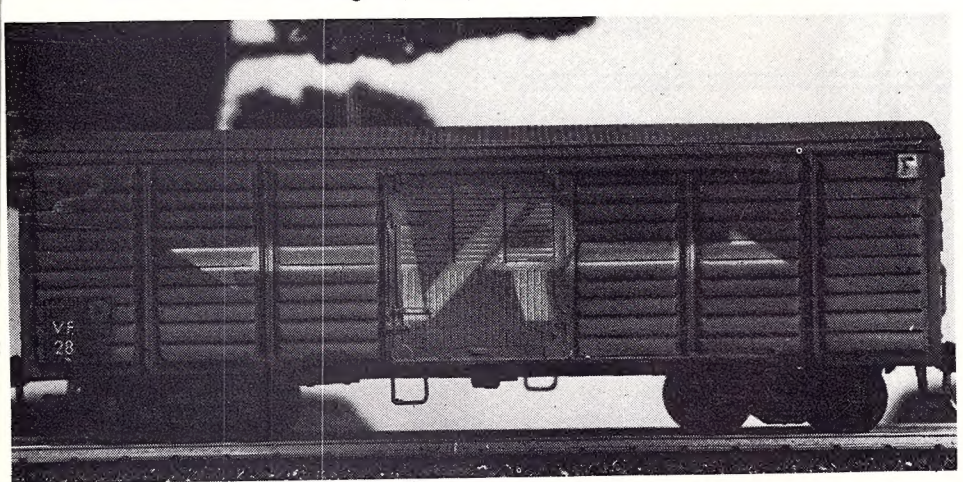
BROAD GAUGE BODIES. SAR OB Waggon Kit [left] and SAR M Van with Type 1 door [right]. Polyester type castings. Kits do not include bogies, couplers or decals. Price for each kit $5.95.



BROAD GAUGE BODIES. SAR D Louvre Van. Polyester type castings. Kit does not include bogies, couplers or decals. Price $5.95.



BROAD GAUGE BODIES. VR VP Louvre Van. Polyester type castings. Kit does not include bogies, couplers or decals. Price $6.25.



BROAD GAUGE BODIES. VR V Louvre Van. Polyester type castings. Kit does not include bogies, couplers or decals. Price $5.95.
[Once again, our thanks to Ritchie Congleton for building, painting and weathering the BGB models illustrated].

The range of BROAD GAUGE BODIES kits continues to increase. All kits are HO scale and are moulded using a Polyester type material. BGB kits DO NOT include bogies, decals, paint or couplers.

SAR M VAN Type 1 door, plain steel roof. $5.95
SAR M VAN Type 2 door, plain steel roof. $5.95
SAR M VAN Type 1 door, corrugated roof. $5.95
SAR M VAN Type 2 door, corrugated roof. $5.95
VR V LOUVRE VAN 2 wooden louvre doors, corrugated roof. $5.95
VR V LOUVRE VAN 4 wooden louvre doors, corrugated roof. $5.95
VR VP LOUVRE VAN Wooden louvre doors, corrugated roof. $6.25
SAR DWf VAN Type 2 door. This kit requires a PECO chassis. $4.50
SAR OB OPEN WAGGON Tarped. $5.95
SAR OB OPEN WAGGON Tarped, tiedown variation. $5.95
SAR OBf OPEN WAGGON [4 wheel] Tarped. This kit requires a PECO chassis to complete. $4.60
SAR D LOUVRE VAN Wooden louvre door, plain steel roof. $5.95
PECO 4 Wheel Chassis Kit $2.65

Expected from BGB by the time this magazine appears are the VR VSX Van and the SAR SE bogie explosives Van, then in late April the VR ZF Guards Van. Watch for further releases from BGB during 1981.

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CONVENTION

MELBOURNE — Victoria. April 17, 18, 19 & 20, 1981 at Hobson's Bay. For further details contact Hobson's Bay Convention, PO Box 105, Vermont 3133.

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The following issues are available subject to prior sale:—

No. 1 — April/May, 1963 (Reprint)
No. 39 — July/August, 1969
No. 41 — November/December, 1969
No. 44 — May/June, 1970

All the above are available at the price of 45¢ each, including post and packaging.

No. 74 — September/October, 1975

The above issue is available at the price of 60¢ each, including post and packaging.

No. 80 — September/October, 1976

The above issue is available at the price of 70¢ each, including post and packaging.

No. 82 — January/February, 1977
No. 83 — March/April, 1977
No. 84 — May/June, 1977
No. 85 — July/August, 1977
No. 86 — September/October, 1977
No. 87 — November/December, 1977

Issues 82 to 87 are available at the price of 90¢ a copy, including post and packaging.

No. 88 — January/February, 1978
No. 89 — March/April, 1978
No. 90 — May/June, 1978
No. 91 — July/August, 1978
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No. 93 — November/December, 1978
No. 94 — January/February, 1979
No. 95 — March/April, 1979
No. 96 — May/June, 1979
No. 97 — July/August, 1979
No. 98 — September/October, 1979
No. 99 — November/December, 1979

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No. 100 — January/February, 1980
No. 101 — March/April, 1980
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HANDY HINT

For scale turnbuckles as used as screw tighteners on chains (for securing wagon loads) use parts from PC MODELS etched screw couplers.

Stephen Ottaway

SOUTHERN CROSS MODEL RAILWAY ASSOCIATION

Secretary: Trevor Moore.
Membership Enquiries:
PO Box 317,
Epping, NSW 2121.

The annual membership fee for the SCMRA is $10 from March to February and $6 Joining Fee.

Membership entitles you to participate in the activities of the Association, to receive AMRM, and our newsheet Booster. Standards, Recommended Practices and Information Sheets covering model railway practice are included in the joining kit together with a vinyl ring binder and are also issued at regular intervals.

For further details write to the secretary or contact the divisional representative.

Meetings are usually organised on the second Saturday on each month in New South Wales, Victoria and Queensland. For further details and location please contact the divisional representative.

DIVISIONAL REPRESENTATIVES:

Queensland:
Barry Turner,
15 Aberfoyle St,
Kenmore 4069.
Ph: (07) 378 7683.

New South Wales:
George Giraldi,
322 Eilizabeth Drive,
Mt Pritchard 2170.
Ph: (02) 602 3117.

Victoria:
David Gawthorn,
122 George st,
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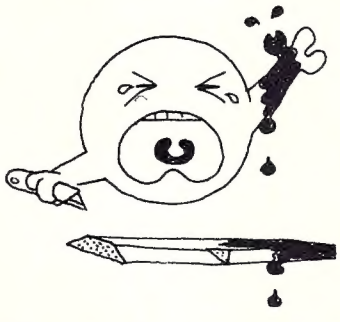

Did you know that the human body contains 38 gallons of blood and it all concentrates in your left thumb when you are cutting a piece of Caneite roadbed?

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Vinyl Magazine Binders of the 12 wire type are now available for AMRM. These accept 12 magazines, i.e. two years or one volume. Cost is 2 for $9.00. Postage is $1.50 for up to four (4) binders and $2.00 for up to ten (10) binders in NSW. For readers in other parts of Australia postage is $3.30 for up to ten (10) binders. A name sheet is available for 20¢. The binders will accept most other model railway magazines.

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Assistant Editors (NSW) ..... **Paul Rogers, Bradley Hinton, Stuart Liversey**
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Layout
John Casey, Phil Curnow, Bob Gallagher

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Australian
Model Railway Magazine

COMMENT

Australian Railways as a modelling subject is in the beginning of a boom period: never before has the modeller had such a wide range of products to choose from. The new modeller entering the hobby can now choose to model the Australian scene with the knowledge that he can acquire very good quality scale equipment in a ready-to-run state direct from the hobby shop. Unlike modellers of old, if the newcomer wants to supplement his ready-to-run equipment with other rolling stock he does not have to learn scratch building talents, for there are now high quality polystyrene kits on the market that are easy to assemble and, as such, make it easy for the beginner.

Or do they!

The kits are well designed and generally assemble together easily, as long as the modeller has a few wits about him, for the instruction leaflets accompanying the kits are aimed at only the experienced modeller, and very little information or detail regarding the product is evident. In some instances there is more advertising on the leaflet than assembly instructions. These kits are the basis for a finely detailed model, but the information re the detail is missing.

This is not a new problem, it having been with us for many years, but with the fresh approach taken by the new manufacturers a repeat of poor and inadequate assembly details was not expected. Manufacturers must be looking for good sales to give them financial returns, but as the kits are aimed only at the existing modeller the chance of good sales must be hampered. The existing modeller has been the basis of the hobby for many years, and many have built up their rolling stock numbers by various means and are not prepared to dispose of these to replace them with the new products, so manufacturers must look further afield than just the present modeller.

What is needed is a new approach by the manufacturers, who in reality will gain the financial benefits from the increased sales. The kits need to be packaged in an attractive manner so that they will sell themselves to the prospective customer who does not know what a 'XYZ' wagon is. If the assembly details included with the kit assist the purchaser in putting the kit together or detailing it a new participant in the hobby will have been recruited, and as such another customer for the Australian style kits. Detail information need only be a photograph or a few clear concise diagrams, but they must be aimed at the individual who does not know all the fundamentals of kit assembly or the specific prototype, for in reality most of us are in the grey area, as far as information is concerned.

Bob Gallagher

ON THE COVER: *X41 North Melbourne Loco shed. 2/8/58. Photo K. Buckland.*

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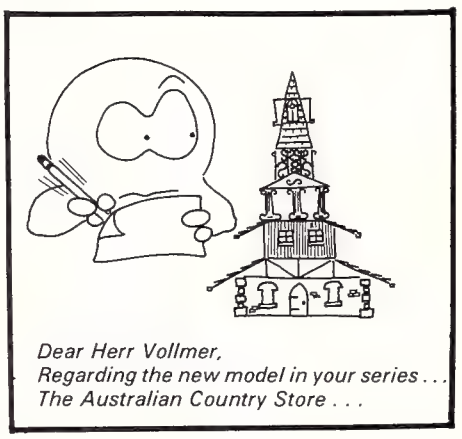
An example of the exquisite scenery detail crafted for the BYLONG layout by Chris and Ray Pilgrim. Photograph by Jack Parker.



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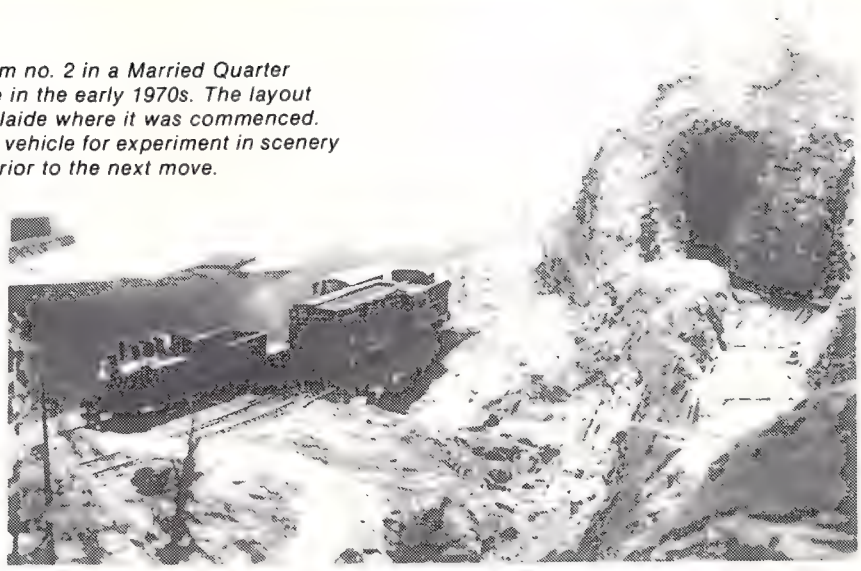
These photographs show the occupant of bedroom no. 2 in a Married Quarter in Puckapunyal when Ross Hurley was posted there in the early 1970s. The layout was then 10 years old, having been moved from Adelaide where it was commenced. Though it was operational, it served in later years as a vehicle for experiment in scenery and tracklaying before it was dismantled prior to the next move.



SCENIC ROUTE

Right
Looking along Hookina Ck. towards Mt. Rawnsley. All the scenery was constructed using the hardshell techniques described in Kalmbach's "Scenery for Model Railroads". The barrenness of the Flinders Ranges scenery is really because the gum trees and native pines were still in the developmental stages on the workbench. They were 'grown in' later. Incidentally, the first attempts at rubber bonded tracklaying, with code 65 rail, can be seen in progress along the spur on the right, pre-dating Clive Huggan's welcomed articles on this method by a couple of years.

Centre
Clearing a landslide from the base of Mt. Rawnsley. The track was shifted out from the base of the mountain some years ago and a retaining wall was built, but occasionally the slides still reach the line. The rock cliff-work was made by lumpily splatting thickish plaster onto the hardshell form with a kitchen knife, and carving it as it set.

Below Right
A stock train to Gladstone sits steaming in the midday sun as two representatives from the Civil Engineer's department discuss an overnight landslide.

Below
The roadside goods to Wilmington is pulling in to the Hookina Creek siding to cross an opposing train to Gladstone.

SCALE MODELLING IN 5" GAUGE

Scale modelling is not restricted to the small gauges, as some of the photographs on this page illustrate. Max Burke is the photographer and the subject is The Great Northern which is a 5" gauge live steam railway owned and operated by Jack Wilson and Lindsay Brack at Narara, NSW. Rolling stock was built by Allan Taylor.

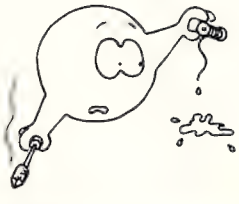
The layout is 500 ft long and the motive power includes 4-6-2, 2-6-0, 0-4-0 steam locomotives while a 4-6-0 and a 4-4-0 are under construction.

Above
Mountain Goat Railway Goose, a 26" long model is battery powered.

Right above
Model of a NSWGR 'SHG' brake van.

Right
Model of a NSWGR 'HG' brake van.

Below
Part of the train consist, flat, poison tank and 'SHG' brake van.



Boy — I'll say that's Lo Melt solder.

In 1956 3804 slogs up the heavy grade of the Cowan Bank, with the afternoon 'Flyer' in tow. When the 7 car 'HUB' sets were introduced in 1946 the C38 class became the standard motive power until diesel power took over. Note the cars have the lines above and below the windows. Ron Preston photo.

PROTOTYPE PLAN

THE 'HUB' CARS

Commencing a three part series describing the 'HUB' cars as used on the New South Wales Railways

Article: Paul Rogers.
Plans: Roger Johnson.
Photos: Bob Gallagher.

N.S.W. S.R.A. photograph illustrating the BH car as introduced with the russet and red colour scheme.

Part 1 — PFH, FH and BH Cars

During the late 1940s and early 1950s, the New South Wales Government Railways established a large fleet of air conditioned trains for daylight express services throughout the State. The vehicles described in this series of articles were the first production run locomotive-hauled air conditioned carriages to be used on the N.S.W.G.R. system. They have appeared on many intrastate and interstate services during the past three decades, but there is one train on which these vehicles have operated continuously since their inception — the Newcastle Flyer!

Prologue

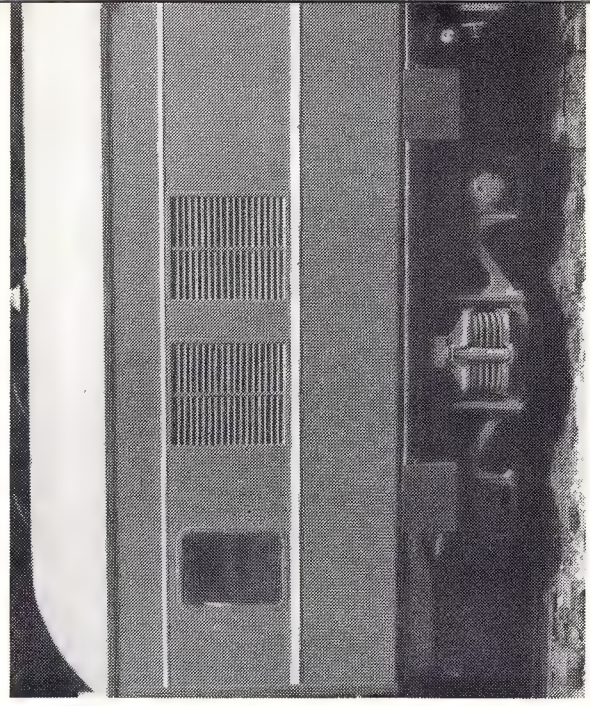
In 1936, first class corridor/saloon buffet car RBX.124 was modified to air conditioned status, and became the prototype for the extensive family of locomotive-hauled air conditioned coaches in service today. Initially, this vehicle operated in conjunction with a bogie

louvred van fitted with power supply equipment; but later the RBX car received axle generated fixtures. Assigned to the Brisbane Limited Express, RBX.124 reverted to non-air conditioned rank during the early 1940s.

Despite the apparent success of RBX.124 as an air conditioned coach, and the commissioning of lightweight diesel powered trains containing this characteristic during 1937, the N.S.W.G.R. appears to have been reluctant to adopt the higher standard of accommodation offered by air conditioning for new locomotive-hauled vehicles. Steel carriages, of both corridor and saloon configurations, continued to be built as non-air conditioned stock, although the 'N' type tourist cars dating from 1939 were fitted with a forced ventilation system. Indeed, as late as 1943, contracts were still being placed for non-air conditioned vehicles; however, the cars covered by these agreements eventually appeared with air conditioning as standard equipment. Included in this group were the coaches forming the subject of these articles.

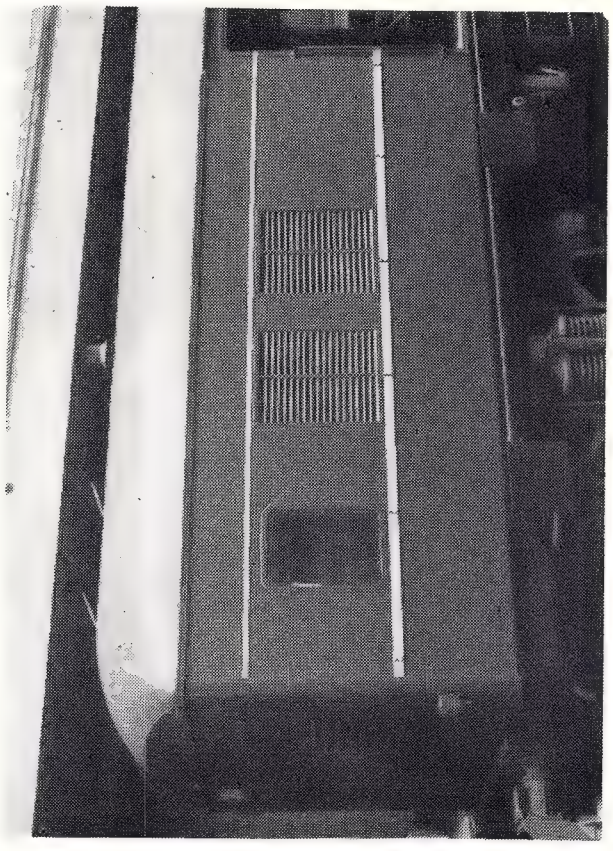
The 'HUB' Sets

The 'H' series cars were originally intended to be a repeat order for the 'N' type carriages, the contract placed with Tulloch Limited, Rhodes, New South Wales calling for the construction of 9 FN class intermediate cars, 8 BN class intermediate cars and 8 HFN class terminal cars — sufficient vehicles to make four 6-car sets. Assuming that the capacities of these codes related directly to the original series of 'N' stock, each rake would have held 404 passengers (112 first, and 292 second, class). By 1945, the specifications called for the manufacture of 27 cars, comprising 8 HFH class terminal cars, 8 BH class intermediate cars, 7 FH class intermediate cars and 4 RBH class intermediate buffet cars. If the capacities of these vehicles were the same as those for the present 'H' type cars, a 7-car set consisting of 2 HFH, 2 BH, 2 FH and 1 RBH cars would have accommodated 311 persons (101 first, and 210 second, class). There are two important points to be noted about the amended contract: firstly, the acceptance of air conditioning as standard equipment; secondly, the inclusion of buffet facilities in the proposed sets. Axle

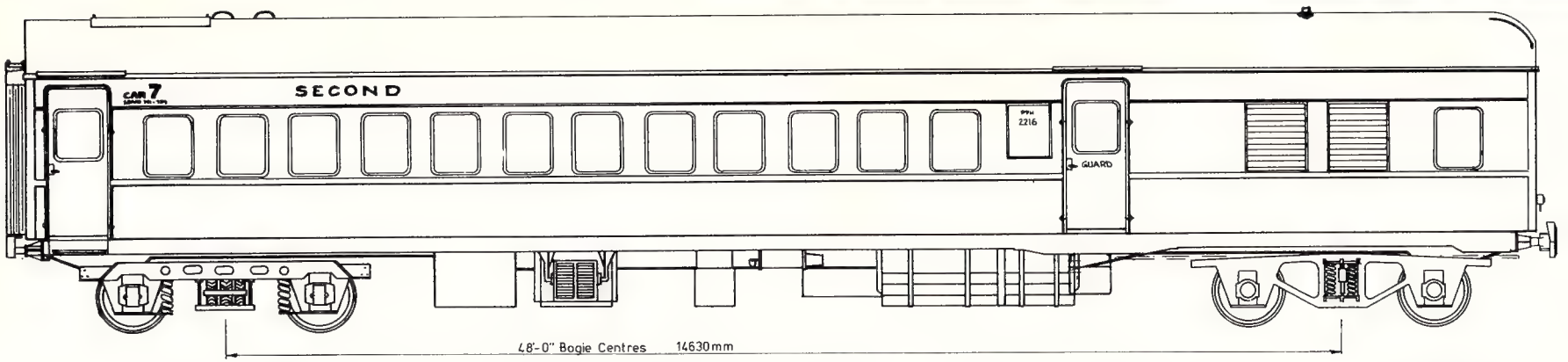


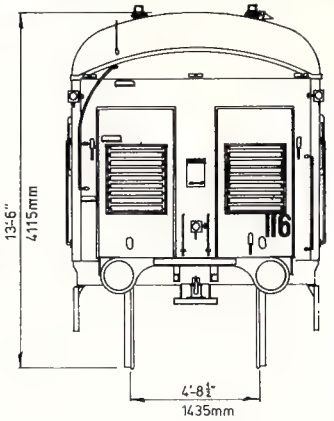
2BS bogie as fitted under the terminal end of the PFH car.

N.S.W. S.R.A. photograph illustrating the PFH car as introduced in the russet and red livery. The two tone colours were broken by the buff lines above and below the window panels.

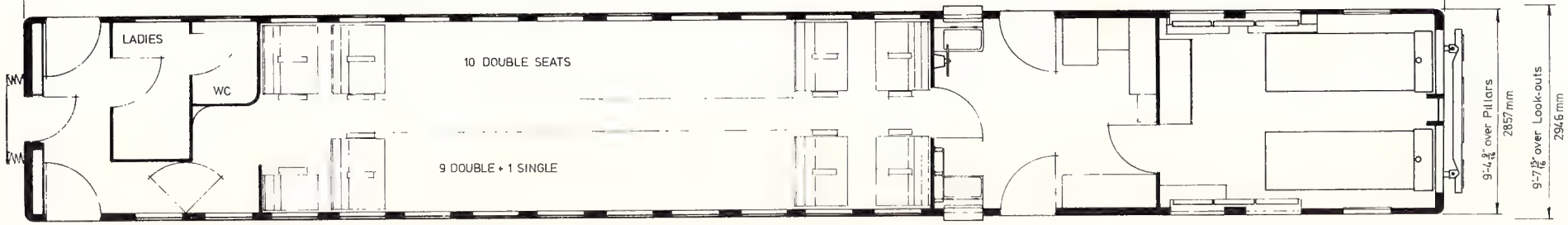


Note the louvres in the end of PFH.

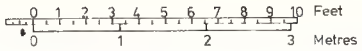




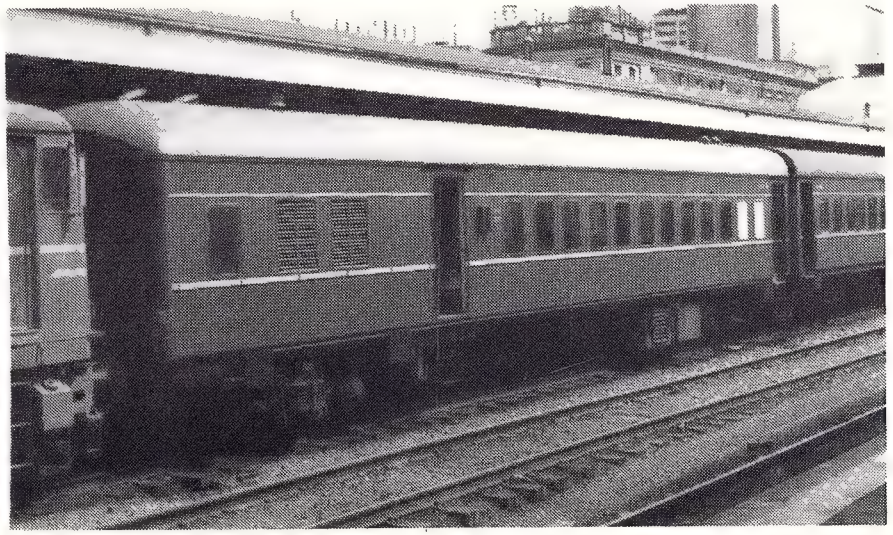
48'-0" Bogie Centres 14630mm
66'-8½ Coupled 20332mm
65'-0" over Pillars 19812mm

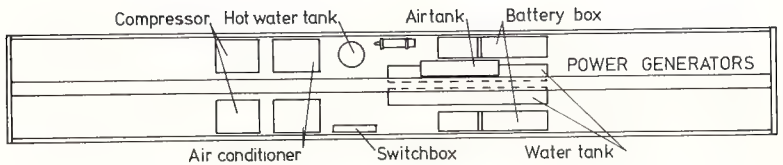


65'0" PFH POWER TERMINAL CAR
NEWCASTLE FLYER
HUB SET

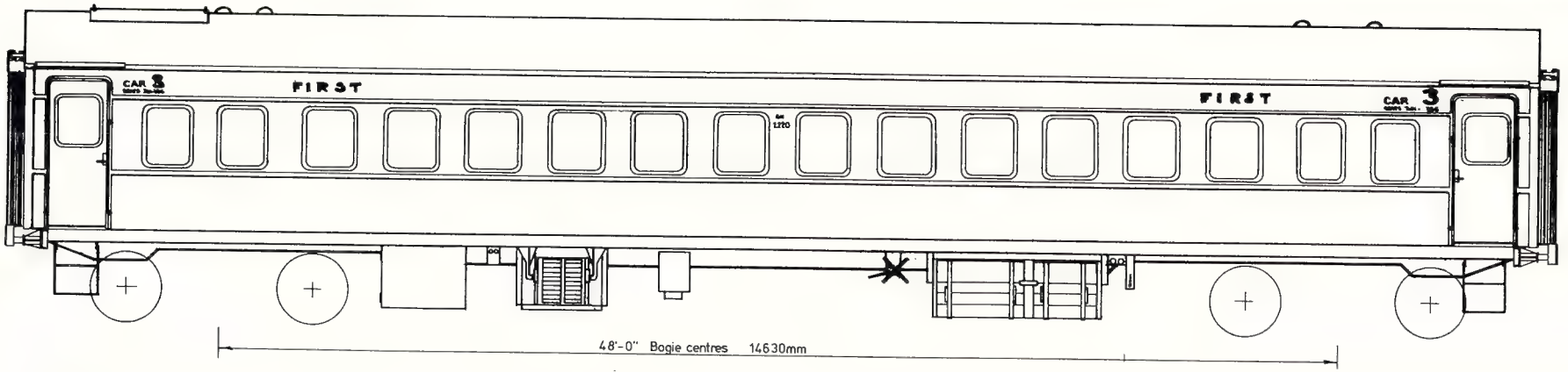


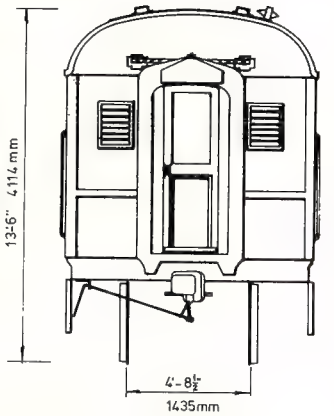
PFH
Power Terminal Car
HUB Set



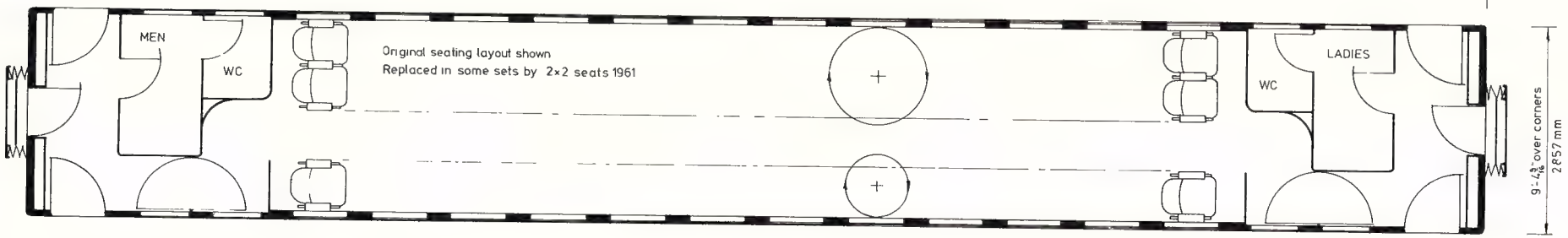


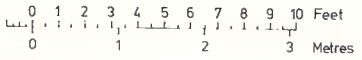
PFH Underframe Details





Note : Louvres other end only

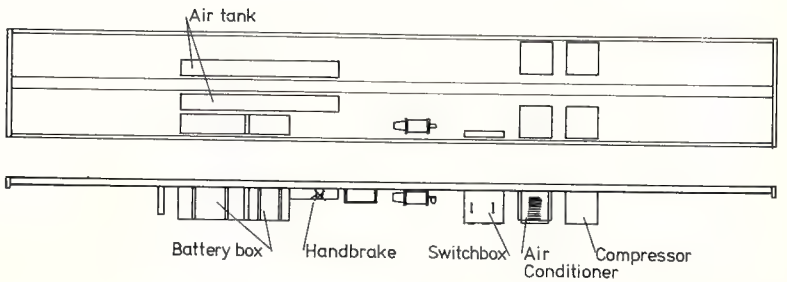




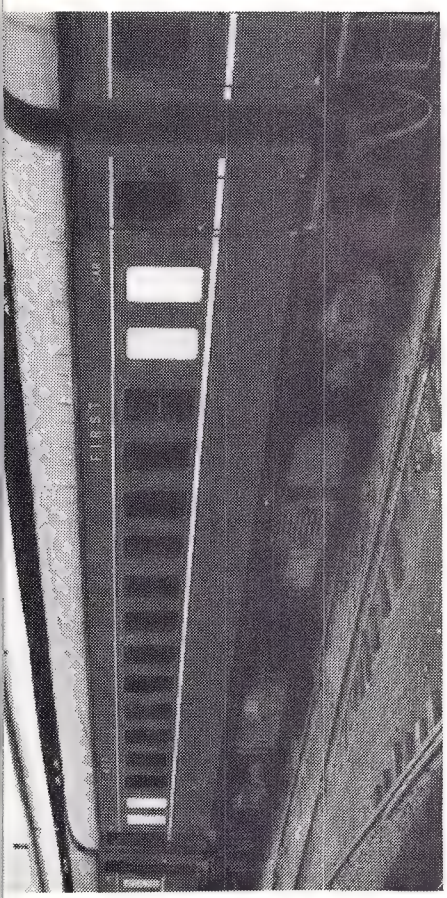
BH
1st Class Intermediate Car
HUB Set

BH 65'-0" STEEL CAR
1st CLASS INTERMEDIATE CAR
NEWCASTLE FLYER HUB SET

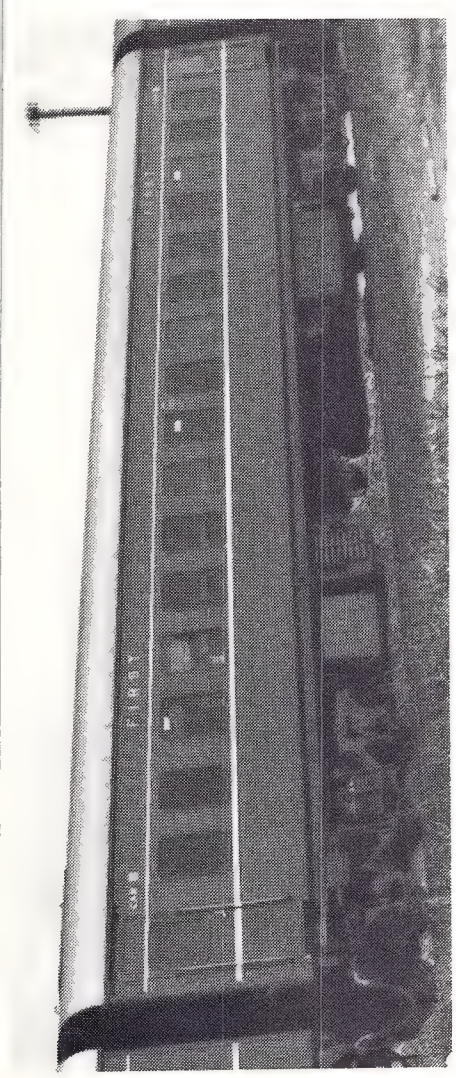
Close-up view of battery box on BH.



BH Underframe Details



Toilet side of the BH car.



Plan view side of BH car.

generated equipment was obviously still in favour at the time, as evidenced by the fact that all the terminal cars were cited as standard brake coaches.

During 1945/46, the contract was further amended to provide for 28 cars, comprising 4 HFH class terminal cars, 4 PFH class power/terminal cars, 8 BH class intermediate cars, 4 FH class intermediate cars, 4 RBH class intermediate buffet cars and 4 RFH class intermediate buffet cars. Each 7-car set accommodated 286 passengers (101 first, and 185 second, class); the later alterations to the BH and RBH coaches increased each set's capacity to 317 persons (132 first, and 185 second, class). Initial deliveries of the 'H' cars were made in 1947, and by 1948 sufficient carriages were available to enable the commencement of revenue earning services.

The original formations of the 'HUB' sets were:

HUB.116: HFH.2212, FH.2228, RBH.2236, BH.2220, BH.2221, RFH.2232, PFH.2216.
HUB.117: HFH.2213, FH.2229, RBH.2237, BH.2222, BH.2223, RFH.2233, PFH.2217.
HUB.118: HFH.2214, FH.2230, RBH.2238, BH.2224, BH.2225, RFH.2234, PFH.2218.
HUB.119: HFH.2215, FH.2231, RBH.2239, BH.2226, BH.2227, RFH.2235, PFH.2219.

Until the 1960s, these sets generally operated as strict formations, irrespective of traffic requirements. In recent years, however, flexible operating procedures have been adopted: 'H' type cars now operate in shortened or lengthened sets, as independent vehicles, or in association with air conditioned cars belonging to the 'RUB' sets.

General Description of Vehicles

Like their predecessors of the 'N' series, the 'H' type cars were of all-steel construction; other similarities included the use of tapered roof ends at the outer extremities of the terminal cars and the spacing of windows in a manner identical to that of the 1939-built stock — a legacy of the specifications issued in 1943 for the repeat order. Internally, however, the 'H' type coaches featured many improvements on the older design; standard fittings associated with the 'HUB' sets include a public address system, fluorescent lighting mounted in centrally located ceiling troughs which run for the entire length of each saloon, individual reading lamps located below the continuous luggage racks, iced water fonts, tiled toilet floors, rotating and reclining chairs (in first class sections) and individual ashtrays (in smoking areas). Polished timber internal bulkheads and upper side walls, white ceilings, and coloured fabric covered lower side walls, together with the provision of coloured scenic photographs at each end of the passenger areas, enhance the appeal of the 'HUB' set coaches. Since the mid 1970s, several vehicles in the 'H' series have been refurbished to 'dayniter' status; these alterations will be mentioned in a later portion of this article.

Power for the cars in 'HUB' type sets is supplied from the PFH class terminal car or from power/brake vans of the PHO, PHS and PHV (ex RHG) series, jumper cables being employed between the carriages. Each vehicle in the 'H' series is also fitted with conventional battery boxes for emergency lighting supply. The outer ends of the PFH and HFH cars originally carried drawhooks and screw couplings which were later replaced by automatic couplers. The inner ends of these terminal vehicles, and both ends of each intermediate car, have always been fitted with the knuckle coupling. Plate buffers have always existed at the outer end of each terminal car, the remaining coupling points in the set being bufferless.

The 'HUB' sets were designed for short to medium distance journeys; consequently, refreshment facilities consist of buffet cars which are used to prepare meals on a tray service basis, detachable tables being fitted to the backs of the seats during the relevant periods. The table used in the RBH car's compartment plugs into the side wall of the vehicle.

Saloon style seating exists throughout the 'HUB' set, except for a single compartment placed near one end of the RBH type buffet car. This cabin is the only passenger area where incandescent lighting is employed.

The running gear for 'H' type carriages is the 2AN style four-wheeled bogie which has a 2.44m (8'0") wheelbase, except for the terminal end of the PFH car, under which a 2BS type 2.44m wheelbase four-wheeled bogie is fitted. Originally, the 2AN bogie was used at both ends of the power/terminal vehicle.

Livery

Initially, each vehicle in the 'H' series was liveried in the duo-tone scheme of tuscan red and russet, with buff lining above and below the windows. Class designations, vehicle identification and supplementary data appeared externally in yellow with red shading. Nameboards were fitted to the FH and RFH type vehicles; later photographs show that many of these boards were removed. Over the years, simplified exteriors appeared: the first major change was the abandonment of the two tone colour scheme in the mid 1950s, and its replacement by solid tuscan red lined above and below the windows. Towards the end of the 1960s most cars had either no lining or only a single line below the windows; in recent years, many vehicles have been restored to the lining style of the late 1950s.

Roofs appear to have been painted light brown during the early years of the 'HUB' sets, but other colours (including silver and dark grey) have been used in more recent times. Irrespective of the livery chosen, service conditions reduce the colour of the roofs to black within a short period.

In September 1969, an A.N.Z.R. Commissioners' Conference agreed to market second class passenger services under the "economy" label. The first public use of economy class designation coincided with the commencement of the 'Indian-Pacific' services early in 1970. As far as New South Wales rolling stock was concerned, the following policy was adopted:

a. First class cars, and sleeping coaches (except for composite and sleeping cars), would remain unchanged in relation to external designation of accommodation.
b. Economy class cars would have the legend "SECOND" removed from their exteriors, but the word "ECONOMY" would not appear as a replacement.
c. Composite, and composite and sleeping, cars would carry the legends "ECONOMY," "FIRST" and "SLEEPING," as appropriate.
d. Buffet cars would only be affected if they belonged to the second class designs, the alterations being the same as for standard second class stock, except for the retention of the word "BUFFET" externally.

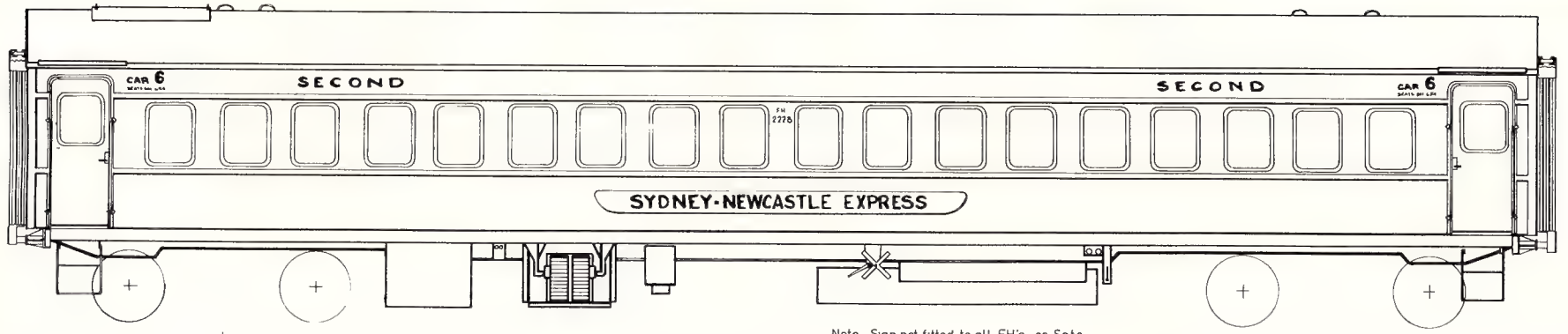
Most New South Wales passenger cars have been altered in this manner, although some economy class vehicles can still be seen in operation bearing the word "SECOND" externally. All former second class cars in the 'HUB' sets have been changed to the new standards.

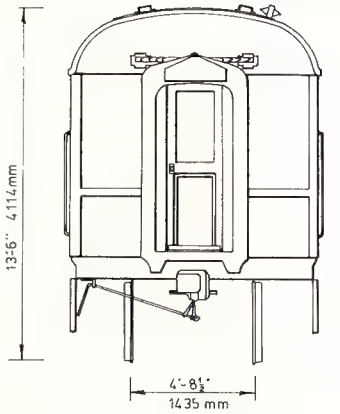
One class rolling stock, intended for use as either first or economy class vehicles (depending upon traffic requirements), are devoid of external accommodation markings. At the time of writing, the 'H' type cars involved in this category were the RDH type buffet coaches.

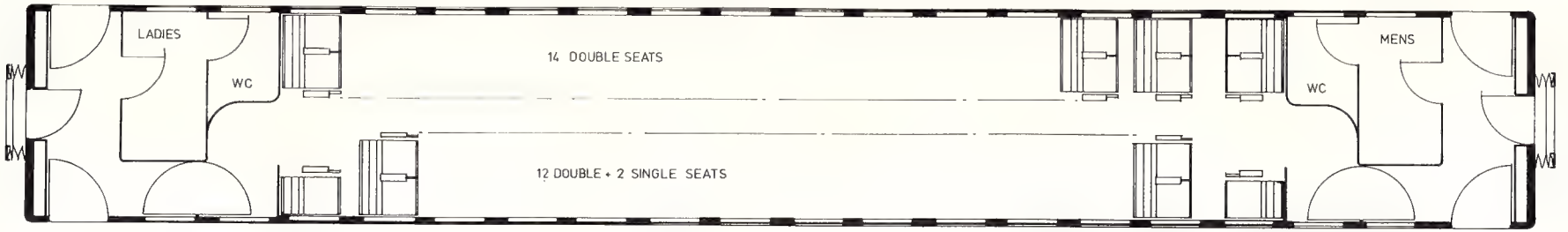
Rolling Stock

a. PFH Cars

The PFH class power/terminal car, at its outer end, contains a compartment which houses the twin diesel alternator units. A bulkhead separates this section from the guard's com-





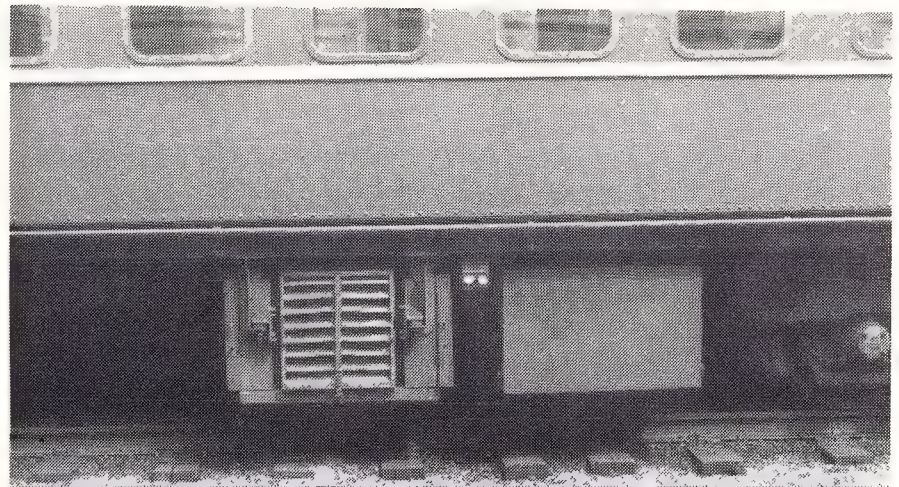


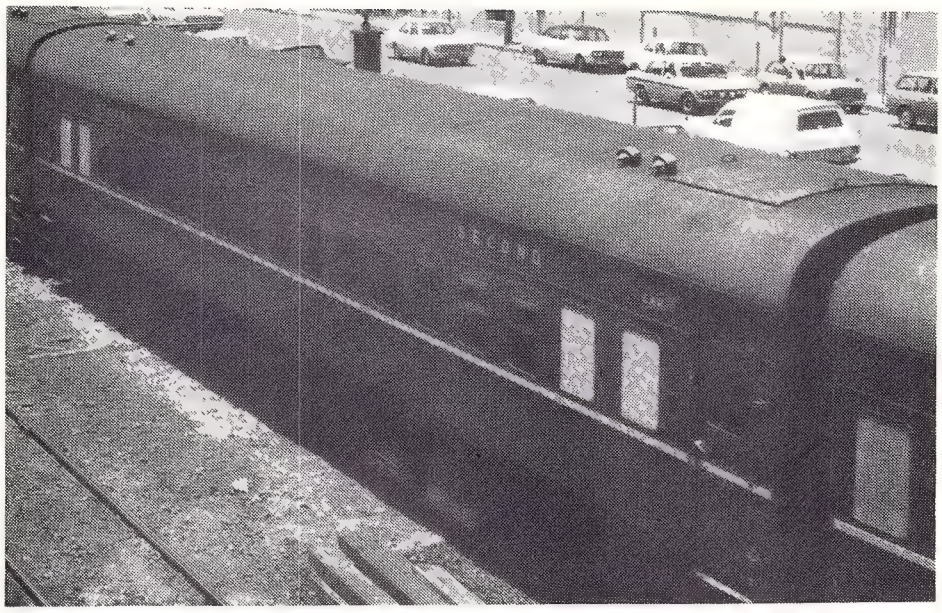
FH 65'-0" STEEL CAR
2nd CLASS INTERMEDIATE CAR
NEWCASTLE FLYER HUB SET

0 1 2 3 4 5 6 7 8 9 10 Feet
0 1 2 3 Metres

FH
2nd Class Intermediate Car
HUB Set

FH second class car. J. Beckhaus photo.





Roof view of FH car. J. Beckhaus photo.

partment. Another partition divides the guard's compartment from the passenger saloon which seats 39 economy class people. A ladies toilet/washroom is situated between the passenger saloon and the entrance vestibule.

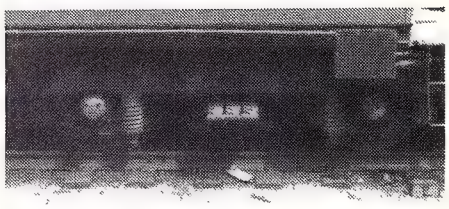
The vehicles in the PFH class have only one official passenger door on each side of the car, these doors being sited at the inner end of the vehicle. However, staff access is available through each of the bulkheads, and a service door is provided on each side of the car, thus allowing direct passage from the exterior of the unit to the guard's compartment. The inner end of the PFH car contains a door fitted with corridor connections which allows access to adjoining vehicles. The outer end wall is blank, as is the case also with the corresponding end of the HFH terminal car; in this respect, the 'HUB' sets differed from their ancestors, the 'NIB' sets.

The tare of each PFH car approximates 47 tonnes, and load rating is set at 49 tonnes. Completion dates for the vehicles were: PFH.2216 — 4/1947; PFH.2217 — 6/1948; PFH.2218 — 12/1948; PFH.2219 — 3/1949. Between September 1975 and December 1976, PFH.2217 had its generating equipment declared inoperative and was reclassified as EFH type. This vehicle reverted to the PFH coding when the equipment was reactivated.

b. FH Cars

The FH car is the standard economy class intermediate vehicle in the 'HUB' sets. These vehicles were completed as follows: FH.2228 — 7/1947; FH.2229 — 8/1948; FH.2230 — 2/1949; FH.2231 — 5/1949. Each vehicle tares 41 tonnes and is load rated at 45 tonnes.

The layout of the FH car consists of a central saloon seating 54 passengers which is flanked at each end by an area containing a toilet/washroom and entrance vestibule. A door at each corner of the coach provides for ingress and egress movements. Doors at each end of the FH car provide covered access to adjacent rolling stock.



2AN bogie as originally fitted under the HUB set cars.

c. BH Cars

The BH car is the standard first class intermediate vehicle in the 'HUB' sets. These vehicles were completed as follows: BH.2220 — 3/1947; BH.2221 — 6/1947; BH.2222 — 3/1948; BH.2223 — 1/1948; BH.2224 — 2/1949; BH.2225 — 10/1948; BH.2226 — 6/1949; BH.2227 — 9/1949. Each vehicle tares 41 tonnes and is load rated at 44 tonnes.

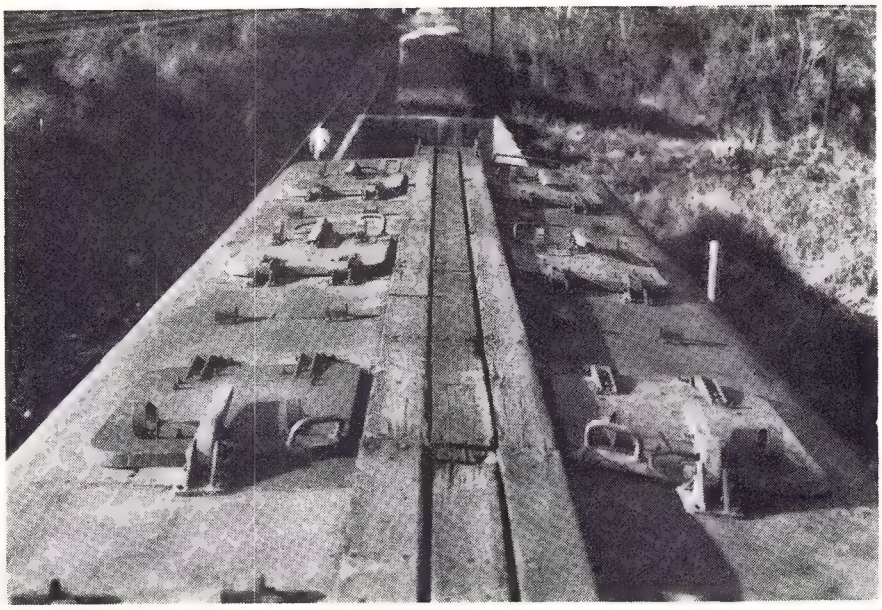
The layout of the BH car consists of a central saloon seating 48 passengers which is flanked at each end by an area containing a toilet/washroom and entrance vestibule. Passengers enter the car, and alight from it, by means of a door placed at each corner of the coach. Doors at each end of the BH car provide covered communication with adjacent vehicles.

As built, the BH car seated 36 passengers, the accommodation being arranged on the basis of a row of single seats down one side of the centre aisle and a row of double seats down the other side. The modifications which caused the increase in capacity to 48 persons per car took place furing the early 1960s.

(to be continued)

MODELLING TIPS

'TRC' ROOF DETAIL



One of the few problems with the TRAX 'TRC' kit was the lack of detail supplied on where to position the ice hatches in the roof. The instruction leaflet accompanying the kit illustrates the position of the hatches lengthwise but ignores the position of the hatch from the roof walk. As can be seen from the photograph, the hatches are positioned very close to the roof walk, and a standoff dimension in excess of 1mm would be too much.

Bob Gallagher

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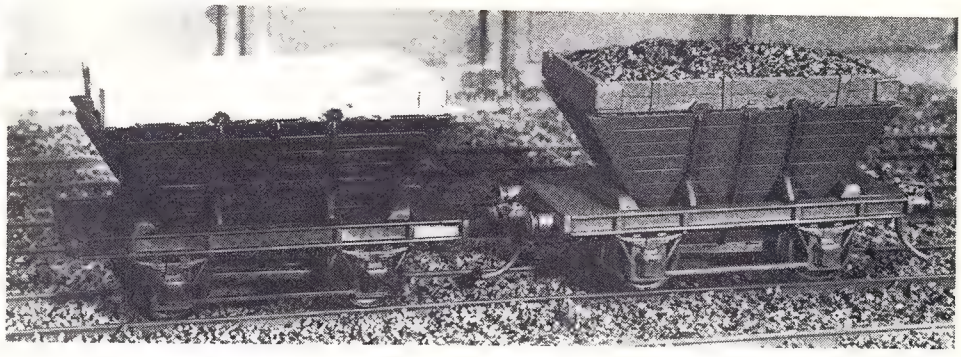
MODELLING PROJECT

KITBASHING a 'CCH' from a TRAX 'LCH' Kit



CCH hoppers in model form.

by Gregory D. Young

Prototype

The LCH class coal hopper was the New South Wales Railways Department's version of the non-air hopper that was to be found in the Newcastle and Wollongong coal areas. In the mid 1950's two ten inch (250mm) 'hungry' boards were added to the top of some 'LCH' hoppers to increase the carrying capacity for the lower density crushed coal. By 1963 the hoppers so altered carried the CCH coding and in 1970 there were 863 in service. Thus the 'CCH' hopper, with a carrying capacity of 13 tons of crushed coal, came into existence.

In such form these hoppers could be seen in Sydney, Newcastle, Wollongong and Lithgow areas until the advent of the Shirley era which saw the commencement of the rolling stock up-grading programme and the demise of four wheeled rolling stock. As such very few are now in existence, although there were 40 on the register at the beginning of 1980. There are, however, one LCH and one CCH preserved by the Hunter Valley Steam Railway Museum.

The Model

The conversion of a TRAX LCH kit into a CCH hopper is not a difficult or lengthy task, but modellers will need the following material and tools.

Tools

Modelling knife — Exacto or similar.
Saw — Zona or similar.
Scale rule.
Modellers vice.
Super Glue and/or five minute epoxy.

Materials

North Eastern stripwood — 3/32 spacing.
Brass angle (K&S ⅛").
0.010" styrene sheet.
TRAX 'LCH' kit (fully assembled).
St. George Hobbies' buffers.

Construction

1. Using a knife cut a strip two planks wide from the stripwood, cutting the strip into two lengths of 13'3" and two lengths 6'9".
2. Cut four pieces of brass angle a scale 12" long and, using a file, remove burrs.
3. Using a steel rule and knife cut a scale 6" strip from the styrene sheet, cutting the strip into ten 12" lengths.
4. Superglue the 13' lengths of stripwood to the brass angle, the timber fitting inside the angle. Check for squareness and then superglue the 6'9" lengths of strip wood into brass angle to form a box section. The groove in the timber strip should be to the outside.
5. After leaving to cure, place the hungry boards on top of the hopper and, using a sharp pencil, mark the position for the styrene strips.

NOTE: When the hungry boards section is centralised over the hopper the styrene strips will be in the centre of each panel. There are four strips to each side and one on each end of the hopper. (Use prototype photo for reference).

6. Superglue the strips in place using the tip of the sharp knife to pick up and position the styrene strips. Leave to cure for ten minutes or so.
7. Glue the extension to the top of the hopper using five minute epoxy adhesive, and leave to cure.
8. A section of lead is added to the inside of the hopper for additional weight, and a coal load is then added.
9. The completed hopper is now added to the assembled underframe which has been detailed with the St George Hobbies' brass buffers.
10. The wagon is now ready for painting and decals.

Colour Scheme

LCH and CCH hoppers were painted in the standard goods wagon grey, but were well weathered with coal dust and grime. (No hoppers were known to be painted PTC blue.)

Lettering and Numbering

Both LCH and CCH wagons were lettered and numbered in a similar style; the prototype photographs can be used as a reference.

Hopper: Both numbers and letters were on the fourth plank (down from the normal top) of the hopper body. The lettering is to the immediate left of centre while the numbering is to the right of centre.

Frame: Generally the lettering and numerals were on the side sill directly below the hopper numbering.

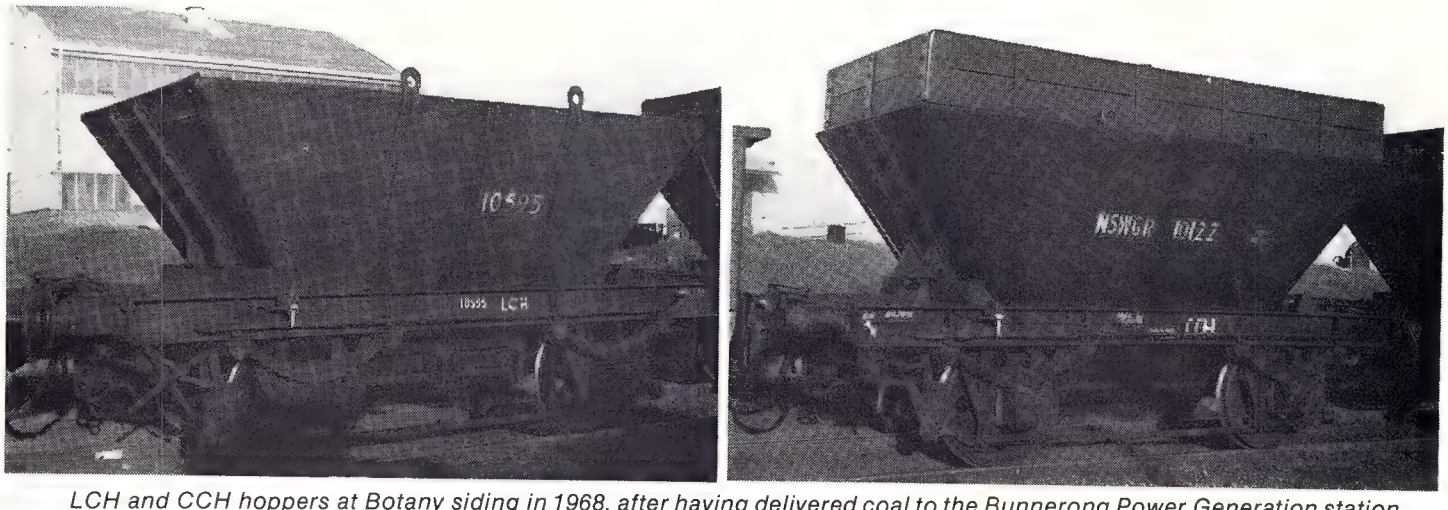
Numbering Series

LCH: 472, 682, 860, 901, 1044, 1120, 1242, 1333, 1697, 3218, 3832, 4060, 4152, 4392, 4967, 5922, 8097, 8283, 10104, 10123, 10127, 10129, 10133, 10135 and various numbers to 10600.

CCH: 45, 168, 571, 748, 773, 984, 994, 1238, 1426, 1493, 1842, 1948, 2502, 2858, 2894, 2928, 3343, 3511, 3569, 3993, 4510, 4636, 5305, 5628, 6325, 6796, 8393, 8694, 8994, 9225, 9734, 10108-9, 10112, 10114-5, 10117-22, 10131, 10134, 10136, 10138 and various numbers to 10596.

References

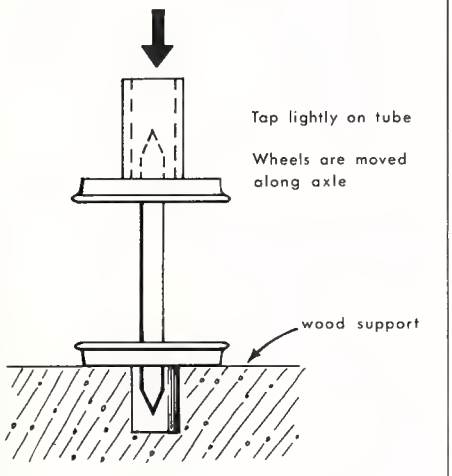
Freight Vehicles PTC 1979.
Locomotives and General Instruction — Dept of Railways NSW 1949.
Carrying Capacity of Wagons — NSWGR 1969.



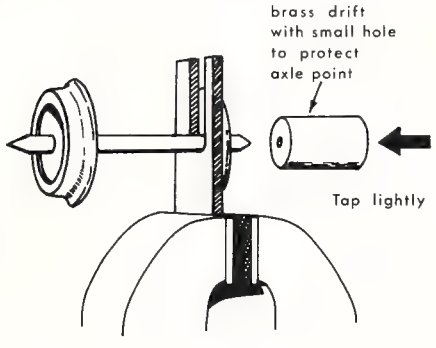
LCH and CCH hoppers at Botany siding in 1968, after having delivered coal to the Bunnerong Power Generation station. Photograph by Bob Gallagher.

GAUGING WHEELS AND TRACK

by Ross Hurley



TO PRESS CLOSER TOGETHER



TO SPREAD FURTHER APART

Fig. 1

To ensure smooth running in a model railway, track and wheels must be gauged accurately. Most equipment conforms fairly well to established standards, but in mass production there are always some items that slip by. It is a good idea to check every piece of equipment you buy.

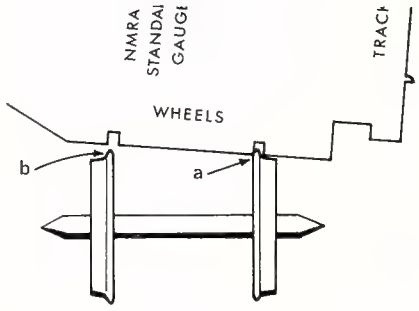
Modelling standards cover a wide range of features. Most are concerned with wheel and track, and cover such things as tyre width, flange depth and width, coning angle, track minimum and maximum gauges, etc. They are designed, firstly so that different brands can run together, and secondly, to be consistent within themselves so that they prevent derailments when everything is within gauge tolerances. Most of these we can leave to the manufacturers. The table lists those standards that are pertinent to us as modellers.

There are only a couple that really matter; Wheel Check Gauge, and Track Check Gauge. Most wheels can be pressed closer together, or spread along their axles, easily. See fig. 1 for methods of re-gauging wheels. One-piece nylon/delrin etc. wheels cannot be changed of course. If they are in gauge, fine; if not, don't buy that brand again, and replace them with wheel sets you can adjust. They will be no great loss anyway. Non-metal wheels are great 'mud collectors', which gets spread all over the track. Metal wheels have a self cleaning function, which helps the electrical reliability of locomotives too. The 'click-clack' over rail joints is a nice bonus.

The proper method of gauging wheels is to check the Wheel Check Gauge. This is the distance from the back of one flange to the running face of the other flange. See fig. 2. This also shows why the check gauge is of critical importance. When running through a turnout the wheels must be guided through the crossing so that the flange does not strike the crossing nose, or deflect to the wrong side of it. The checkrail and flange on the other wheel do this. Checking just the Back-to-Back dimension is not worth a squirt (and nor are standards which emphasise just the Back-to-Back dimension — BRMSB for instance). Different flange thicknesses will produce check gauges of differing dimensions.

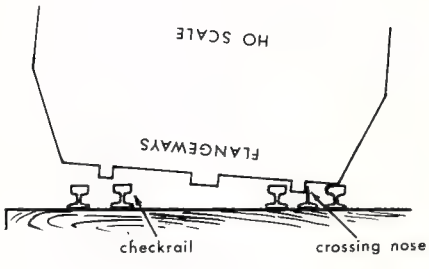
This is particularly important to us here in

Continued on page 25



Hook one slot against the back of one flange, at a., and rock the gauge down onto the other wheel. The corresponding face of the other gauge slot should just slide down the running face of the other flange, at b.

Fig. 3



Hold one lug of the NMRA gauge against the crossing nose, and rock the opposite lug down beside the check rail. It should just scrape down. The Track Check Gauge can be slightly wider than the NMRA dimension, but never narrower.

Fig. 4

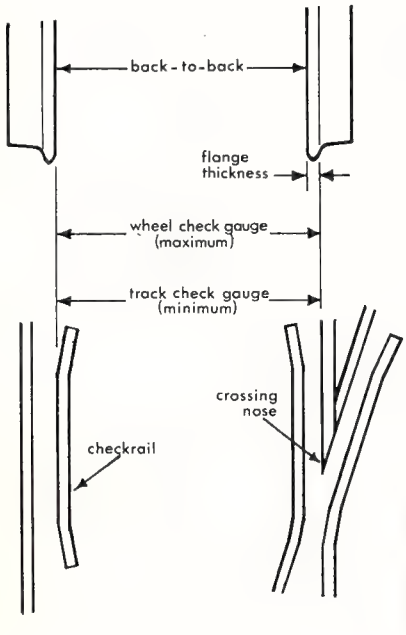


Fig. 2

PERTINENT WHEEL AND TRACK STANDARDS

(All dimensions in millimetres)

NMRA STANDARDS

Scale	Track Gauge (minimum)	Track Gauge (maximum)	Track Check Gauge (minimum)	Wheel Check Gauge (maximum)	Back-to-Back (minimum)
O (48:1)	31.75	32.39	29.77	29.77	28.4
S (64:1)	22.23	22.73	20.62	20.62	19.74
HO (87:1)	16.5	16.94	15.24	15.24	14.38
HOn3 (87:1)	10.49	10.87	9.47	9.47	8.76
N (160:1)	8.95	9.66	8.1	8.1	7.4

3mm SOCIETY STANDARDS

TT (100:1) HOn3½ (87:1)	11.8	12.2	11.0 (+0.1, −0.125) (a)	(11.0) (b)	10.25 (±0.15)

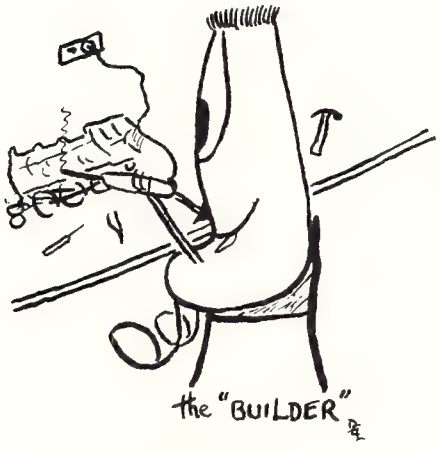
(a) The plus and minus tolerances should be ignored. As for NMRA standards, use the recommended figure of 11.0mm as a minimum dimension.

(b) The Wheel Check Gauge of 11.0mm is *not* a 3mm Society standard. None is specified. A WCG can be calculated, using Back-to-Back & Flange Width, but its eventual tolerances are so wide that derailments would occur whenever a minimum TCG and a calculated maximum WCG co-incided. As for NMRA, use the figure of 11.0mm as a maximum dimension.

WHERE DO YOU FIT?

David Leaman

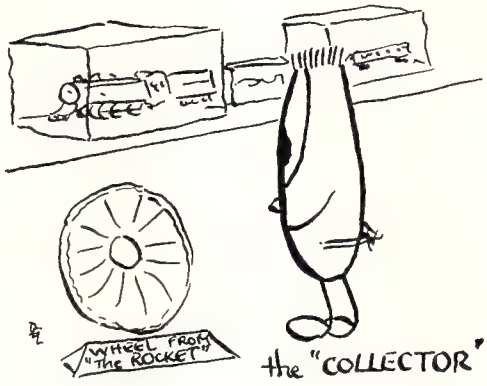
There are many facets to the hobby of model railways. Just as many facets as there are people involved. Yet we may be grouped by attitudes and desires. I do not claim that the ten categories offered below form a complete list but everyone can squeeze into at least one box.



The BUILDER

The builder shows his distaste for proprietary equipment (however good) by desiring to produce better with his own hands. Or, failing to achieve this heavenly goal, to at least say "all my own work". Of course there are cases where builders are created of necessity — when the prototype is so obscure, unique or just plain undesired that no businessman worth the name will undertake to produce it, ever. The builder spends most of his time creating works of art and engineering, some of which never run, due to unfortunate interactions of materials, or more usually because there is no time to lay track. Some builders are so impressed with their one or two completed items that they become displayers. Eventually, however, most builders become keen operators or dictators.

can occasionally be roused by visitors to 'display' their established but unused layout. A sad, frustrated group.



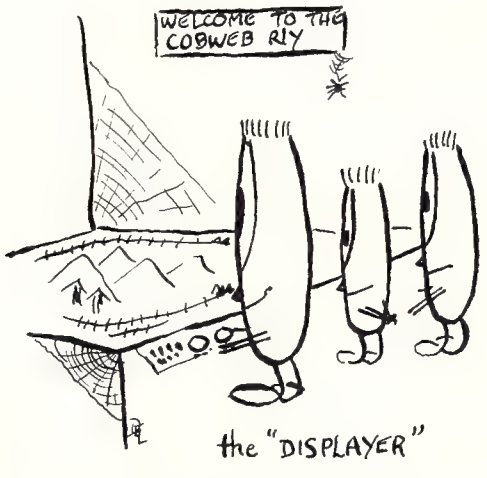
The COLLECTOR

Collectors are generally secretive with an innate desire to start a junk yard. Or they may be refugees from the stock exchange looking for investments. Or, plan railway fanatics with or without sufficient storage space who will acquire anything that takes their fancy. Most collectors are buyer-displayers or buyer-safe fillers (an undefined category) but some of those who have sufficient compatible stock may become players or operators. Many collectors simply sit on their hoard, often acquired second-hand, and wonder what to use or do next. They tend to watch others try things and think "I'll learn from their experience", but tend to put off indefinitely any actual doing of their own.

simply modify or tolerate operational problems, he must totally revise. You see, the developer is also a psychopathic wrecker. Starting early in life (under ten like most of us) he bought, or was given, or scrounged up material for layouts. He developed them, dismantled them, rebuilt. He may have moved several times. All this inculcated a habit of temporariness of layout. When maturity of site or age approached the cycle was not broken and failing to perceive other sources of fulfilment he has to rebuilt. By contrast the anti-developer builds a layout in such a way that it can be prefabricated elsewhere if necessary. Thus, though we all have a development phase, some achieve a satisfaction apart from carpentry, layout design or scenic works. Our developer is a keen, active hobbyist but it is a moot point whether he ever actually enjoys his creations — when finished. Certainly they do not last.

The BUYER

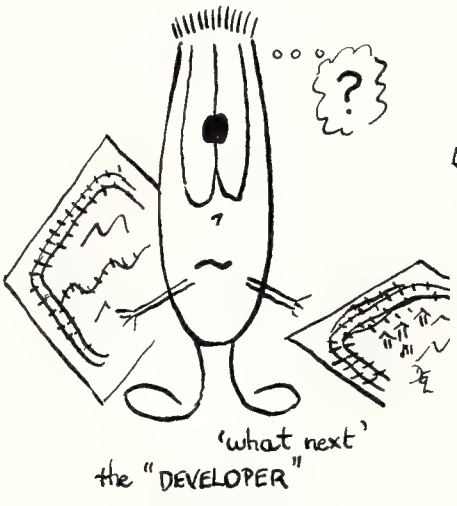
The buyer is a compulsive, impulsive character. He may also be a collector. Most of us at some time are restricted only by the thinness of our wallets or the wifely words from behind (where Satan was told to go) since natural impatience demands acquisition now or completion of our plans yesterday. The spirit of buy, buy . . . buy!! is the usual introduction to the hobby. Only later, much later do some of us become builders, developers, dictators. Some buyers mature into players or operators (if their choices were coherent and compatible) but buyer-players inevitably retire from the hobby financially deflated. Think of all the kids with toy train sets who never mature in the hobby and you may understand this group.



The DISPLAYER

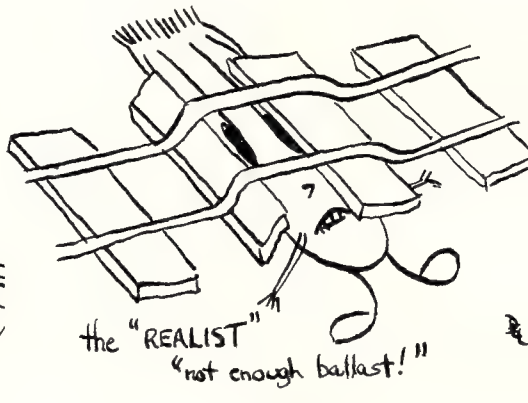
There are three main types of displayer. First, and rarest, is the builder who is so impressed with his efforts that he is not prepared to risk fair wear and tear. This group goes on to build glass cases . . .

Then there are the buyers or collectors who merely have the museum spirit and just desire to look, or lock away. A small group. The largest class of displayers are those who were once builders, developers, etc and became players (definitions below) and are now bored and disinterested. Probably they are now actively engaged in another hobby but they



The DEVELOPER

This is a broad group and comprises nearly everyone at some stage. Usually because we cannot be continuous or effusive buyers we are forced to proceed by staged development. Even collectors and displayers may need to develop their schemes. For many, developing becomes a rut, and our true developer lives in such a rut. He builds up, either as builder-developer or buyer-developer, his layout and plays with it a while (short term player). Then, since this is unsatisfying and 'design faults become apparent' he dismantles it and starts anew. Unlike a real railway he does not

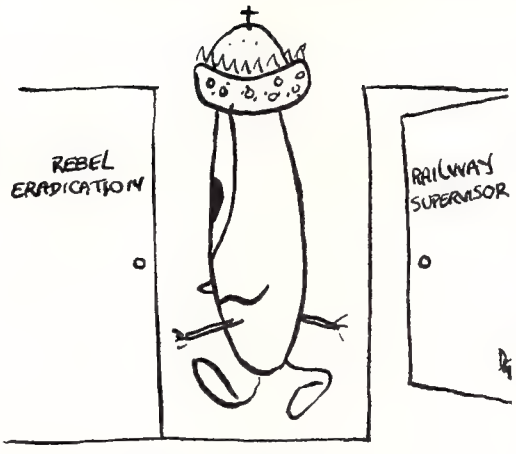


The REALIST

The realist is without doubt the most detested of our family of hobbyists. This group includes the noisy, critical minority (who give a bad name to all realists) which is the scourge of shops, basements and magazines with his "the flanges are too deep", "the rails are not scale", "too few rivets in the tender", etc. Some realists are worth knowing; the ones who recognise that some compromises are essential in modelling and show how to focus on true essentials. Many members of this group are not either, or merely, 'rivet counters' but dedicated modellers who copy aspects, parts or principles of entire railroads. They may be keen builders or buyers or developers but never players and usually keen operators with a minimal dictatorial bent.

The PLAYER

The player is an almost universal character. Who of us upon acquiring a 'toy' train set or 'model' railway has not played with it or used it rather mindlessly and without purpose. This lack of purpose ultimately corrupts our interest, introduces boredom and can aid removal from the hobby. The player may have been a builder/buyer/developer previously (or still) and now merely toys with his layout (or displays it for the few who show interest). Although there may be flashes of the realist in layout design, or aspects of use, there is no integrated purpose. This lack leads players to miss return on their investment and they often go the way of many buyers — the 'for sale' column. Or they may become inveterate redevelopers. A few manage the translation to the realist, operator or dictator where purpose is manifest. Tragically for the hobby as a whole, and for the makers of equipment, this is all too few. To the resentful player the evangelistic operator is a high priest of black magic who keeps his secrets locked away.

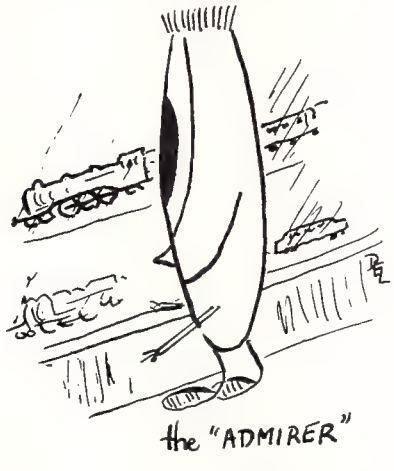


The DICTATOR

(Or empire builder). The Dictator is in a good many of us. He will buy or build, develop then operate (usually like the realist) a model railway as a system. Unfortunately not all with the bent make it, because they do not know how to. But, in the case of the established Dictator, his empire lays before him, every still life passenger or pedestrian a citizen — of his creation. He is god of all he surveys and it is a merciful release from the world outside the walls of his empire. His railway is usually of freelance design if not of home-built stocking. The Dictator is a disgustingly satisfied hobbyist. He is psychologically at home in his own world free of outside cares.

The OPERATOR

Everyone has heard of the operator, but few understand him. So he is hated almost as much as the realist. He describes what he does 'as prototypical' but rarely (if ever) explains the rails to wheels know-how to follow what he does. He has knowingly read the definitions of buyers, developers, players and said to himself (smugly), "of course, they miss our. It's a model railway they're creating and it has to be used and run as such! If it fails to meet its purpose then so will the owner miss out". He has found the interest levels associated with operation, even of a simple layout, to be so high that he cannot understand why everyone does not follow suit. The operator eventually develops and keeps a stable layout and has little wasted hobby time. He can use his railway. He is usually an American, rarely a continental or Englishman, as viewed from available literature. His black magic status is maintained by the continuing dearth of literature on model railway operation.



The ADMIRER

The admirer is the envious individual who wishes he had the money, patience of space to own a model railway. Or he may be a developer player who wished he knew how to get more from his layout.

Every reader is entitled to say, "I am one of those and proud of it." Indeed everyone is entitled to do as they wish and follow their own desires and satisfactions. But there is a main highway in our hobby and most (not necessarily the readers of this illustrious magazine) are on it. It is the road to dismay, boredom, frustration and retirement. It is the route buyer-developer-player. Often these aspects go on simultaneously and while active buying-developing is possible all is fairly well. But when space and/or money run out then a purpose more than playing will be needed to save the investment. There may be one or two who are content to play. Find, but you are a rarity as evaluation of the attitudes of others and the for sale columns will readily show. Of course, not all for-sales result from the stagnant syndrome since prior to maturity in the hobby we may experiment and change in various ways. But we certainly need to beware of it as a risk.

Even some of the side roads can lead to problems. Such routes as builder-developer-operator or buyer-developer-operator-Dictator may cross the highway at player stage. There are also cul-de-sacs; builder-displayer, buyer-collector, or the very common buyer-developer-developer . . . "What are you", I hear some asking. "Where did these whacky ideas come from?" — from a lot of experience and observation. My own track record says it all; admirer, gift receiver (equals buyer), player, drop out, sell out (stock discontinued), admirer, buyer, developer, failed operator, player, displayer, sell out (stock discontinued), buyer, developer, seller (stock line extinguished again!), drop out, admirer, buyer, compromised realist, failed operator, displayer, developer, player, displayer, developer, operator, realist, Dictator. Plus some shared performances; developer, player, seller, developer, drop out. A pretty ghastly list which has taught a few lessons over the years

I am now convinced that if one wants to mature in the hobby and get a good return from it that the hurdle to cross is the one enabling creation of a workable operating system for the particular layout. It is not at all easy to do — note the included failures — but success does lead to variation and interest development that makes the effort and the previous spending well worthwhile. In a word, purpose. The layout has to be given integrated purpose and run accordingly. Or as the operator-realist would say, "model or not, it's still a railway". Does your layout have such purpose now, or as it develops? And anyway, where do you fit in the scheme of things?

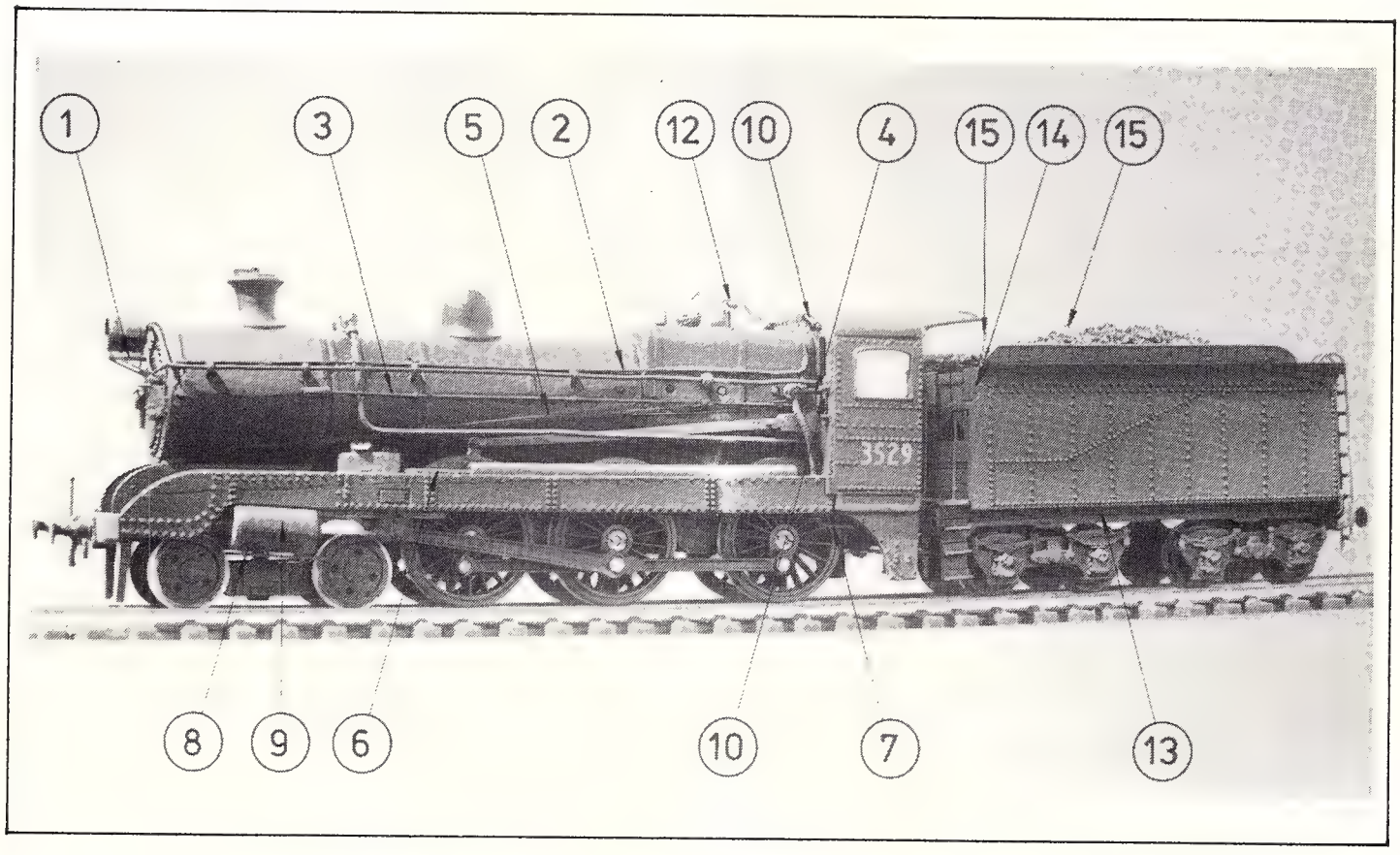
GAUGING WHEELS and TRACK

Continued from page 23

Australia, because of the mixture of American, British and European wheels we use. Using HO as an example, nearly all American and Japanese wheels conform to NMRA RP25 specifications and have a flange thickness of 0.86mm. British wheels vary, depending on brand and recency of manufacture, between 0.58mm and 0.9mm. Continental wheels (Lima, Jouef, etc.) are usually a maximum of around 0.7mm. Adjusting all of these to the one Back-to-Back dimension would produce Wheel Check Gauges varying by up to one third of a millimetre.

Determining the spacing of wheels is easy with an NMRA standards gauge, available at hobby shops. See fig. 3. Hold the gauge against the back of one flange, and rock down on the other. Remember that the Wheel Check Gauge can be slightly less than the gauge dimension, but never more, or the flange will catch on the crossing nose.

The crossing area of turnouts can be measured in the same way. See fig. 4. Modellers who scratchbuild their own track automatically space their check rails from the crossing nose in this way. Commercial turnouts can be checked too, though alteration is not as easy. A plastic checkrail could be shimmed, or pared away a little with a hobby knife. You may be able to shift a metal checkrail by heating it carefully with a soldering iron until the plastic spike heads soften.



DRESS UP YOUR NANNY

Howard Smith shows how to detail a white metal locomotive kit.

Unless you're a scratchbuilder of brass locomotives, I think that you'll agree that the next best thing to a ready-made brass model is a white-metal kit. The one complaint I have against these kits is that they are a bit thick around the edges and lack a lot of the detail parts found on brass models. White-metal kits help fill a big gap in the model line-up, and if super-detailed can take their place alongside the brass models on your railway.

The subject of this article is F.S.M's model of the C-35 class locomotive of the N.S.W.G.R. The model depicts the loco in its final form after a major rebuilding program in which, among other things, a new style of cab and side valances were fitted. The locomotives were originally designated the 'NN' class and hence the nickname, *Nanny,* was given to them by the railway staff.

As with any superdetailing project, or scratchbuilding project for that matter, the more photos you can get your hands on the better. Modellers of N.S.W.G.R. are fortunate in having available many excellent books and booklets from which most of the details can be gleaned.

The following list is a guide to the photographs illustrating this article. I made extensive use of the DATA SHEET for the C-35 while working on this project and unless specified all items have been attached using 24hr. ARALDITE.

No.1 A brass headlight bracket replaces the cast one supplied. Use .25mm (0.010") brass cut into strips and bent to shape. Glue into holes drilled in the smokebox door and glue the headlight to the bracket.

No.2 Conduit to the marker lights and headlight. It runs along the left side of the boiler immediately above the handrail, rises up over the firebox and enters the cab slightly left of centre. A conduit from the turbogenerator enters the cab beside it. Use 0.25mm (0.010") wire and as there are no brackets or posts retaining the conduits, they have to be Super Glued to the boiler.

No.3 Along the left side runs a control rod to a fitting on the side of the smokebox. (Is this the blower control valve?) The rod was made from 0.31mm (0.012") wire that is held in place by loops of 0.25mm (0.010") wire pulled tightly around the shaft and glued into holes drilled into the boiler.

No.4 Shortened pins were used to represent the injector hand-wheel and shaft on each side of the firebox. A hole is drilled from inside the cab through the front into the back of the injector valve. Glue them in place.

No.5 The lubricator lines all start on top of the firebox next to the conduits. Three go to the left and two to the right sides of the boiler and run forward to the tops of the cylinders. A sixth line runs to the top of the air compressor. Glue to the boiler with Super Glue.

No.6 A control shaft for the air compressor runs from the cab to a point in line with the dome. It enters the back of a larger diameter pipe which runs forward to the compressor. Another pipe of similar diameter exits the front of the compressor and enters the smokebox via a right angled bend. From the lower half of the compressor a pipe runs forward and then curves down through 180° and travels back along the walkway to the air tank. There is a tee joint just ahead of the tank from which a pipe to the left hand tank branches off. The control shaft is made from 0.38mm (0.015") wire and the piping from 0.51mm (0.020") wire.

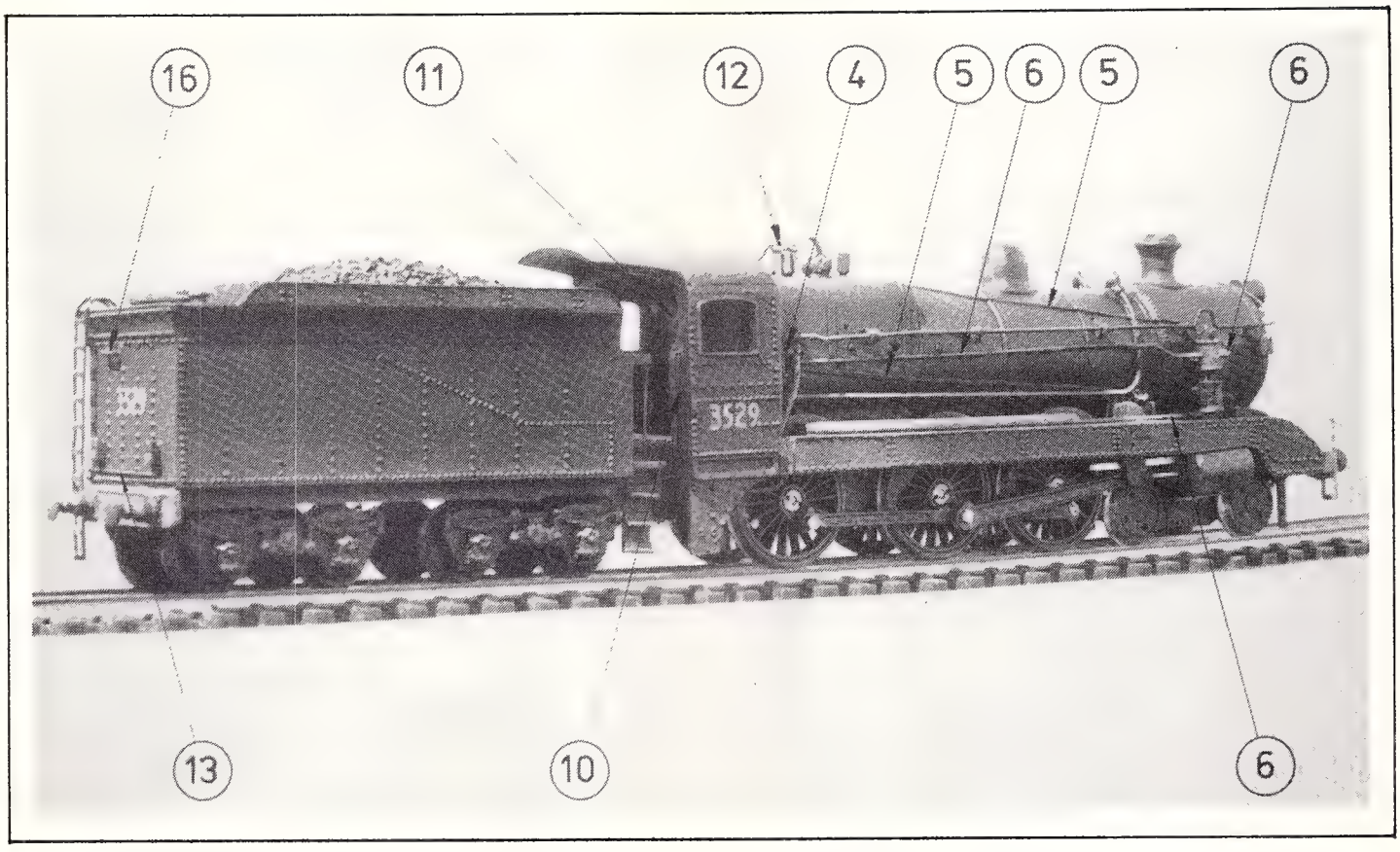
No.7 An extension of the lagged injector pipe is seen under the valance where it makes a bend back to the injector. Use 0.51mm (0.020") wire glued into holes drilled under the footway and the cab.

No.8 Cylinder drain cocks and operating shafts. Wire of 0.38mm (0.015") dia. was used for the shafts and loops of 0.25mm (0.010") dia. were pulled tightly around the shafts to represent the drain cocks as well as providing a means of attachment.

No.9 The cylinder castings need to be angled down slightly. I filed the chassis to obtain the required angle as shown on the DATA SHEET. Once secured to the chassis, the valances need to be filed back until the two assemblies can be fitted together.

No.10 There are four small handrails on the front of the cab and two at the rear. Make these out of 0.38mm (0.015") wire, again held in place by loops of 0.25mm (0.010") wire. Glue in place using a piece of cardboard to space the handrails away from the cab surface.

No.11 The cab interior is completely bare as supplied. I have fitted a set of gauges, a throttle lever and a set of firebox doors. The gauges were made from very short lengths of suitable diameter wire soldered to a backing plate. The sizes of the gauges need only be approximate as they will be difficult to see



when the model is coupled to its tender. Glue in place.

The throttle was made from a piece of 0.51mm (0.020") wire which I flattened for part of its length. I left a small round bit on the end to represent the handle when I cut the lever out. Cut a triangular segment out of 0.25mm (0.010") sheet and solder it to the pivot end. Drill No.76 through the pivot point and solder a length of 0.51mm (0.020") wire into the hole leaving 0.5mm protruding to represent the pivot nut. Glue in place.

The firebox door surrounds and shields were made from 0.38mm (0.015") sheet. Drill a suitable hole in the centre of the assembly to represent the door opening and after gluing to the firebox, scribe a line down the centre to show where the doors meet.

No.12 The safety valves supplied with my kit represented those on the preserved loco, 3526. I was able to obtain a Ramsbottom safety valve casting from F.S.M. to use in place of two of the originals.

No.13 The conduit for the tender marker lights is made from 0.25mm (0.010") wire. It runs from below the marker lights to the left side of the tender and then forward the full length of the side frame.

No.14 The leading edges of the tender sides above the handrail don't match the profile shown on the DATA SHEET, so they need to be filed into the correct shape.

No.15 The fire iron spikes were made from 0.25mm (0.010") wire. The front spike is Y shaped and was made in two halves that were soldered together at their bases. All the spikes were then glued into holes drilled along the tender sides.

No.16 The small handrail at the rear of the tender is made from 0.38mm (0.015") wire and glued into No.78 drill holes.

BASH A K WAGON

For those modellers who would like to try their hand at their first scratch attempt, here is an easy modification to a commercially available item. MRC's 'K' wagon is the subject of this article. This wagon comes with a pressed steel end. There was also a version with a plain end with 2 vertical ribs.

Parts required:

- 'K' wagon kit
- 30 thou. plastic sheet
- 10 thou. plastic sheet (from shirt boxes) or "Micro strips"
- MEK & SUPERGLUE (or similar)
- Knife, file, scale rule.

Method

(Refer Water Tank Issue 84 and photograph.) Build the 'K' wagon as per the intructions except for the ends which are discarded*. Fit wheels of your choice, using MGW bearings which I fully recommend.

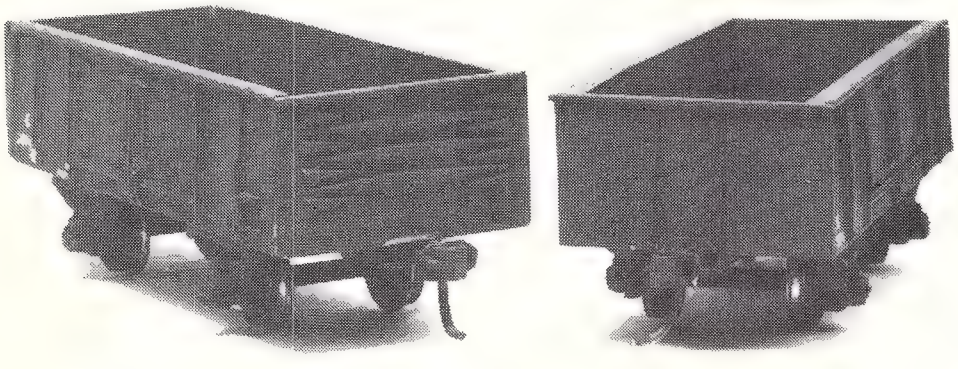
Cut 30 thou. plastic sheet to fit ends. Glue into place. When dry, attach the 30 thou. lip. The lip will be MEK'd into place and filed to width. Using 10 thou. strip, lay on 2 x 6" wide strips. These are 2' 3" apart. When dry, glue on the other half of the angle. Note the lack of rivets to match the remainder of the kit. See sketches for dimensions.

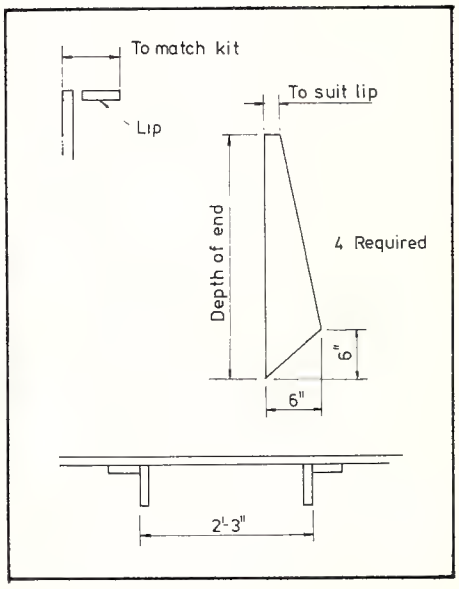
Add couplers of your choice and paint NSWGR black. Road Numbers of this type of wagon are 26775-27774. For a slightly offbeat version paint cream (with lots of rust) and make it a Departmental wagon. (L).

Time for modification:- 3 hours.

**Note:- Discarded ends are usable for GP Bogie open wagon end. Height is 1½" less and width is 6" less.*

Roger Johnson





LOCOMOTIVE MECHANISMS

Bob Dunn describes to Ian Weickhardt the construction of a locomotive drive wheel frame for a HO model

Victorian modeller Bob Dunn recently completed a HO scale model of the VR's heavy Mikado, the 'X' class 2-8-2. This loco is one of several made by Bob, and by virtue of his experience the construction of the mechanism has features of interest to modellers in all scales. In this article these features are dealt with in detail. We hope they encourage all loco builders and would-be loco builders.

There are several key aspects to a satisfactory model locomotive mechanism and Bob has — like many other experienced modellers — tried various methods of achieving them. In his 'X' he has succeeded in combining these aspects.

These key aspects are:

- Adequate weight in the chassis. This aids adhesion and contributes towards a low centre of gravity.
- Adequate — but not excessive — bearing surfaces in the frame for the driving wheel axles.
- Sufficient strength to prevent frame distortion if the loco is involved in a smash (or even dropped!).
- Simple removal of superstructure and wheelsets for maintenance or trouble-shooting purposes.

Adequate weight in the chassis

This is achieved by making the chassis from sections of solid brass bar. Bob built the 'X' chassis from two pieces of brass bar. One is the main frame member in which the driving wheels are supported, and the other (smaller) piece is the 'keeper' for retaining the driving-wheel axles in the main frame. Diag. 1 and the photograph of the underside of the chassis illustrate the principle. The main chassis member is a piece of rectangular-section brass bar suitably machined and fashioned.

The keeper plate is another piece of brass bar. This piece, as well as being a keeper, carries the trailing truck; it also carries wire brushes down one side for electrical pickup from the rims of the driving wheels. The combined weight of the two chassis members makes for good adhesion and the resultant low centre of gravity that reduces the risk of toppling.

Adequate bearing surfaces for driving-wheel axles

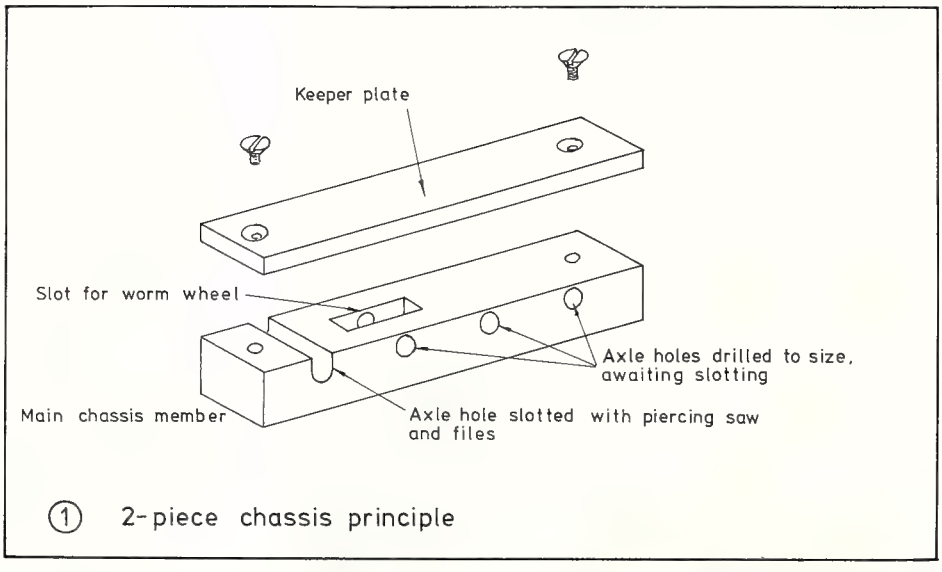
This is achieved by drilling the holes for the axles in the main chassis member. However, if the job is left like that, the amount of chassis metal in contact with the axle would add too much friction drag and so reduce the hauling ability of the locomotive. The idea is to remove unnecessary friction but leave enough metal for long running life. In HO, "enough" metal is about 3mm on each side of the chassis. O-gaugers should provide about 6mm on each side.

On the 'X' the unnecessary metal was removed using a "milling machine". A milling machine is one in which the work piece is clamped in a fixed position and is machined by a rotating cutting tool. The fixture holding the work piece is moved as required by means of traversing mechanisms. Milling cutters take various forms; those used for milling out slots look like thick circular-saw blades; those used to mill out the 'blind holes' below the 'X' driving wheel axles look like twist drills with the ends ground flat.

Very few modellers own milling machines. However, some do own lathes such as Unimats or Sherlines. Milling can be performed in both these types of "modellers' lathes" and in practically any type of metal lathe. If you don't have an acquaintance (or even an acquaintance of an acquaintance) with either a milling machine or a lathe, all is not lost. It is quite possible that somewhere in your area there is a small engineering works having such machines and the machinists that use them. Many of these places will do small milling jobs, such as those on this loco chassis, for quite a reasonable price. Some of the tradesmen in such places are railway modellers themselves! As quite a deal of their work is repetitious, they often welcome small jobs from railway modellers as a break in a monotonous routine. But always approach them as a prospective paying customer, with the chassis material all marked out and with the relevant working drawings.

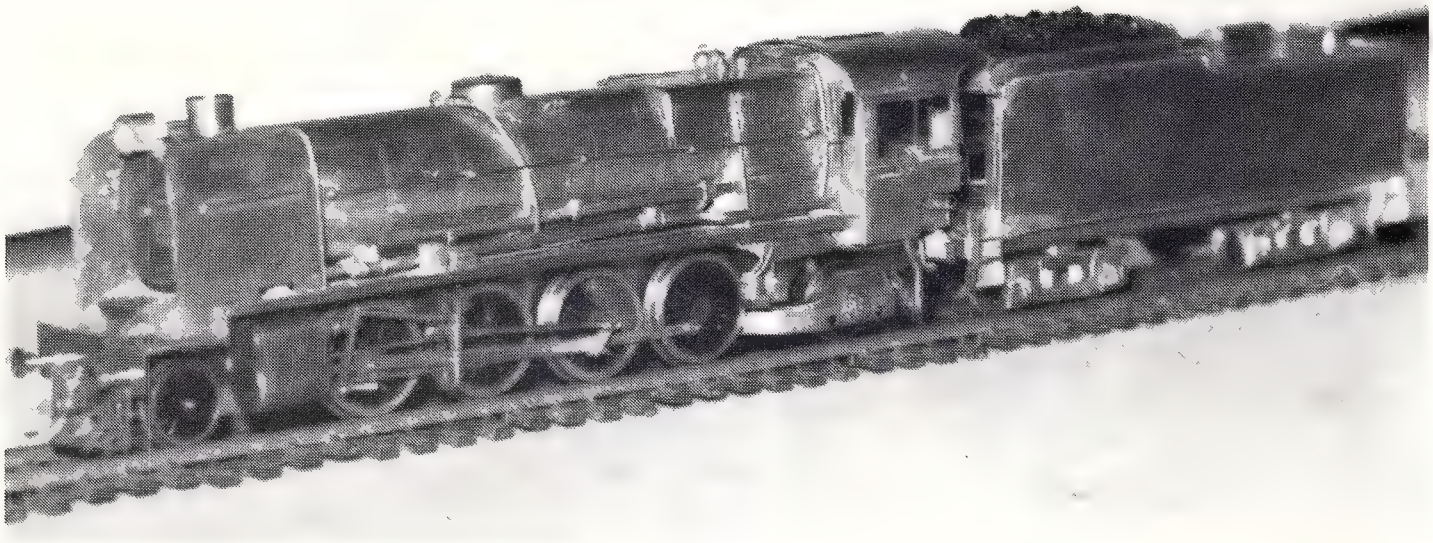
As well as this milling on the underside of the chassis, there is also — as the relevant photo shows — some milling done on the top. This is merely to provide a slot for the gear wheel on the driving axle and to allow for the associated worm drive mechanism. In the 'X' the drive is transmitted from a motor in the tender via a simple "universal" drive.

If, on a loco chassis being built by this method, there is a need for metal to be removed elsewhere, it is best done on the machine doing the milling. The resultant cuts will be flat, true and square if the machine is worked intelli-


Keeper plate
Slot for worm wheel
Axle holes drilled to size, awaiting slotting
Main chassis member
Axle hole slotted with piercing saw and files

① 2-piece chassis principle

Complete and ready for the paint shop.



gently. What is more, it takes far less time and labour.

Alternative methods of frame construction

(a) If making the chassis as outlined above but milling facilities are just not available, proceed as follows:

- Drill the axle holes as specified.
- Drill a row of holes into the frame immediately above each axle hole (diag. 2), taking these holes right through the axle hole and down another two millimetres or so. The row of holes must stop short of each side of the frame — 3mm each side for HO models and 6mm for O gauge.
- Slot the axle holes out as previously described. Any other removal of metal, eg. for the worm wheel, can be done with drills, files and saw as required.

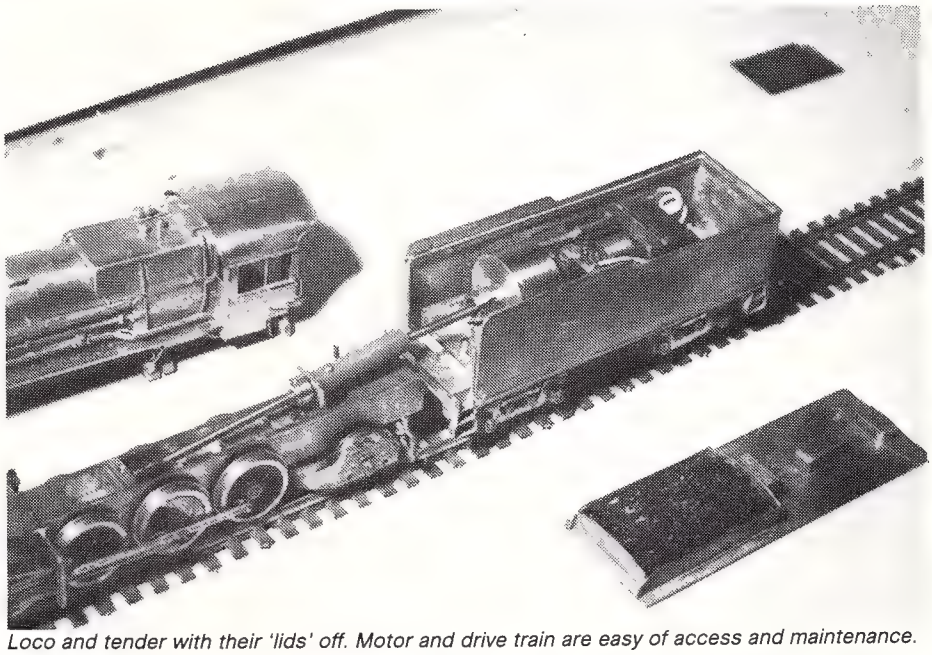
(b) Another alternative is to fabricate the main frame member as shown in diag. 3. Proceed as follows:

- Make up the 2 side pieces and clamp or solder together securely.
- Mark out the axle hole positions.
- Drill the axle holes.
- Separate the pieces.
- Solder or screw them to the main bar.
- The latter step must be done very carefully. The preferred method is to clamp the 3 pieces together, feed long STRAIGHT rods through the axle holes, and check that they are each square with the frame and in line with each other. When this is achieved — and it will help ensure good running of the loco — the soldering can be done, before the clamps are removed. (If soldering, first pre-tin the pieces before clamping them.)

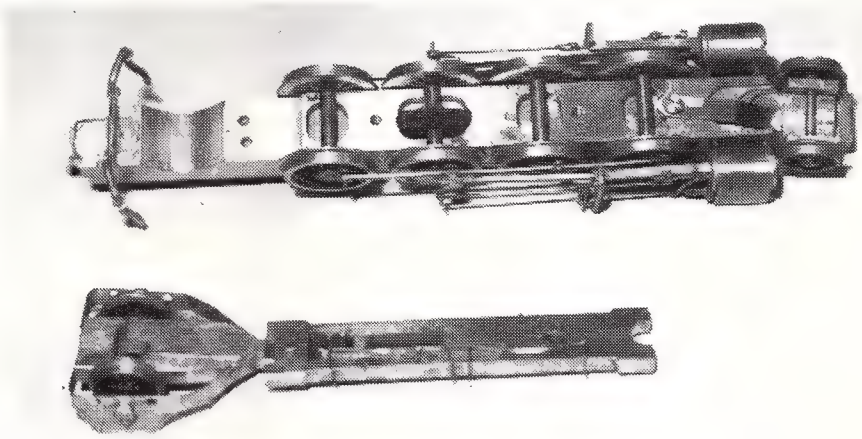
If screwing the frames together, drill and countersink the holes for the screws before removing the clamps.

Sufficient strength to prevent frame distortion

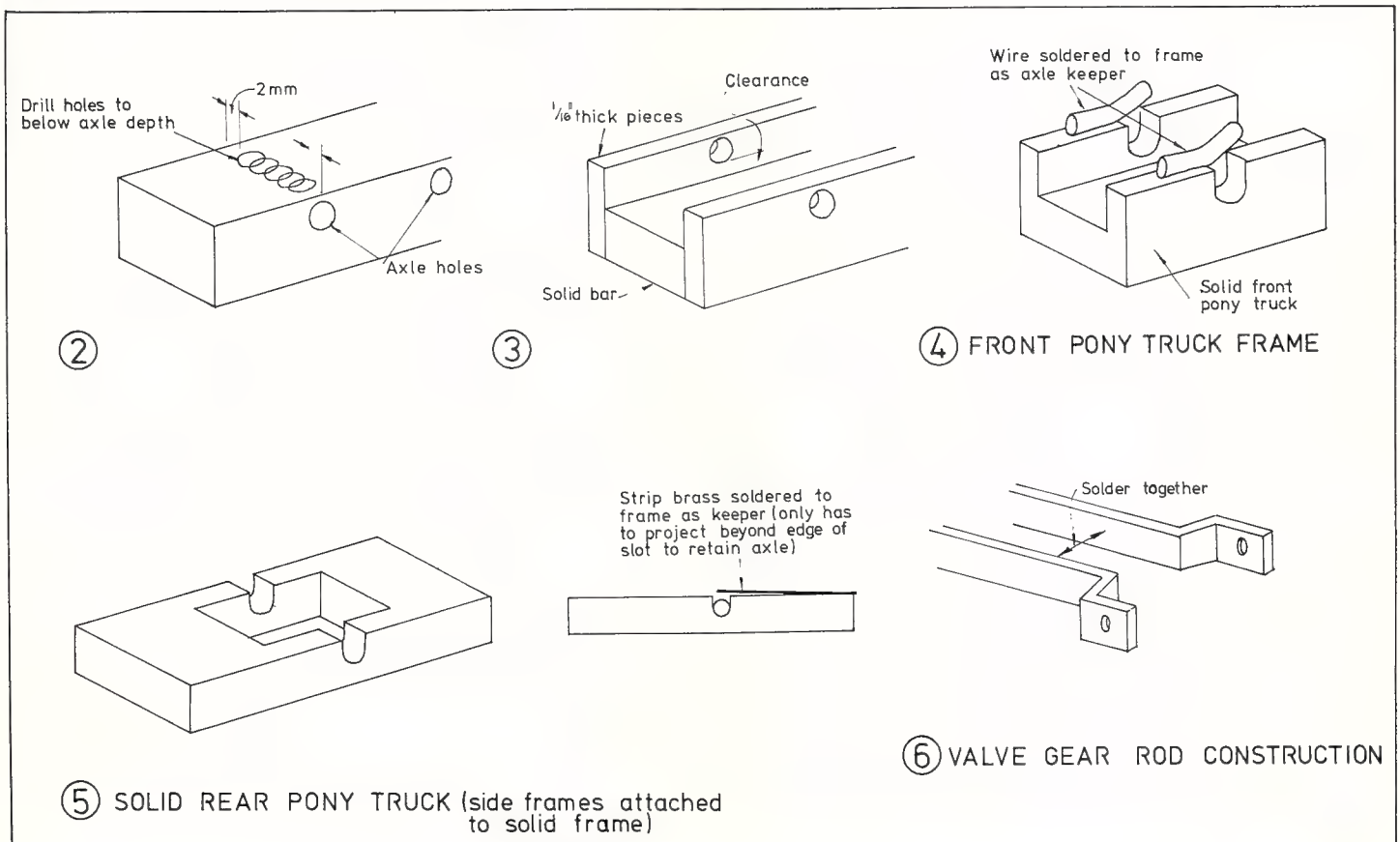
This is so important in models. If a loco takes a tumble on to a hard surface it is inevitable that something will get damaged. Seeing that it is inevitable that such an accident will cause damage, it is best to take the cold-blooded ap-



Loco and tender with their 'lids' off. Motor and drive train are easy of access and maintenance.



Underside of chassis, with keeper plate removed. The trailing truck is pivoted from the rear of the keeper plate as this gives a simple mechanical arrangement.


Drill holes to below axle depth
2mm
Axle holes
Clearance
1/16" thick pieces
Solid bar
Wire soldered to frame as axle keeper
Solid front pony truck
Strip brass soldered to frame as keeper (only has to project beyond edge of slot to retain axle)
Solder together

② ③ ④ FRONT PONY TRUCK FRAME

⑤ SOLID REAR PONY TRUCK (side frames attached to solid frame)

⑥ VALVE GEAR ROD CONSTRUCTION

proach of allowing damage to occur more readily on the parts of the loco that are easier to repair. Bear in mind that an accident that distorts a chassis virtually writes a loco off, as it almost always causes an associated distortion in the superstructure anyway; but a badly damaged superstrucutre on a largely unharmed chassis is not so discouraging. So, deliberately opting for a solid chassis will perhaps allow more superstructure damage in an accident than a chassis with some "give" in it, but will provide for less traumatic repair jobs.

Modellers interested in accurate reproduction of locomotive main frame construction will not be able to all indulge their wishes if they use this method of construction. If, though, their models are not used much for "operating sessions" on layouts, and are not handled by others, then a more elaborate chassis construction technique can be used. Building a detailed chassis can be very satisfying to both the modeller and also to others who admire the finished product.

Simple removal of superstructure and wheelsets

The superstructure of any locomotive should be attached to the chassis by the simplest possible system in order to make it easy to maintain the loco. One common method is to fasten the two units together with two screws: one long screw down the funnel and into the chassis between the cylinder assemblies, and a shorter screw through the back of the chassis and into the thick plate under the cab floor. There are many variations on this theme. The main thing is to have ease of dismantling. Ideally, the loco superstructure is built after and quite independently of the chassis, with the occasional "try-on" as work progresses, to make sure of vital clearances and proportions. Certain aspects of the detailing (eg. cab steps) are often best done with the superstructure attached to the body. It is vital that such fittings and details are not applied such that they connect to both the chassis and the superstructure. If necessary, make the relevant parts APPEAR to be connected to both, but in fact connected to one only. All too often parts are connected to both, and it means that those parts have to be unsoldered or otherwise removed before the chassis can be detached. It is far more satisfying to be able to remove a screw or two to release the chassis for cleaning, lubrication and other maintenance.

On Bob Dunn's 'X' the whole of the superstructure lifts off the chassis; it is not fixed in any way. A lead slug in the boiler provides enough weight to hold the top in place. The front buffer beam and rear back plate fit over chassis ends to arrest fore and aft displacement, and lugs are soldered under the side running boards to give a snug fit against the frame. This method allows for rapid lifting of the superstructure for easy oiling while the loco remains on the track. This is especially useful when the drive is from a motor in the tender. Likewise, it is most desirable to be able to remove the driving-wheel sets without having to do brutal things like punching an axle back out of a wheel in order to free the wheel set. In the 'X' the driving-wheel sets are released merely by undoing the screw fastening the keeper plate.

Note, too, from the photo showing the top of the chassis, the attachment of various parts with screws. Although there is more work in that than in merely soldering or cementing, the benefits outweight the effort. For example, having the drive train brackets secured by screws enables precise adjustment of worm gear mesh, by allowing for the simple insertion of shims. Or, if required, removal so that the bracket feet can be filed down in order to get the mesh right.

The Superstructure

This is built up mainly from sheet brass and wire and other bits and pieces. Many of the fittings are themselves first fabricated from small pieces of metal and wire, and then attached to the loco. Many readers will be surprised how easy it is to make up some fittings for steam outline locos. Have a try!

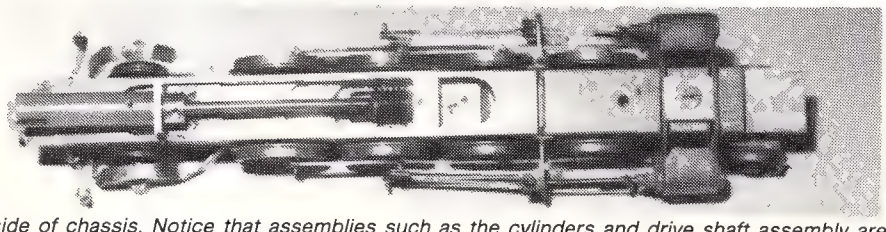
Front and Rear Pony Trucks

The front and rear pony trucks are also machined from solid brass, mainly for weight to keep trucks on the track. This eliminates the need for any springs to keep the truck down. Bob found that spring adjustment on other locos is critical — if the tension is too great it tends to lift driving wheels with resultant loss of adhesion — too little tension and pony trucks tend to lift of the track and derail themselves. These problems are avoided when the pony truck has adequate weight in itself. Diagrams 4 and 5 show the frame details for leading and trailing trucks respectively. Trailing trucks usually have outside frames; on model trailing trucks having a solid inside frame as shown, the sideframes are "dummies" in that they do not carry any load. The axle ends do not need to be seated in the sideframes — the sideframes are merely fastened to the frame for appearance and the axle ends cut or ground off so that they do not foul the sideframes.

Both truck frames are shown with enough metal removed to eliminate unnecessary bearing surface, as in the driving-wheel frame.

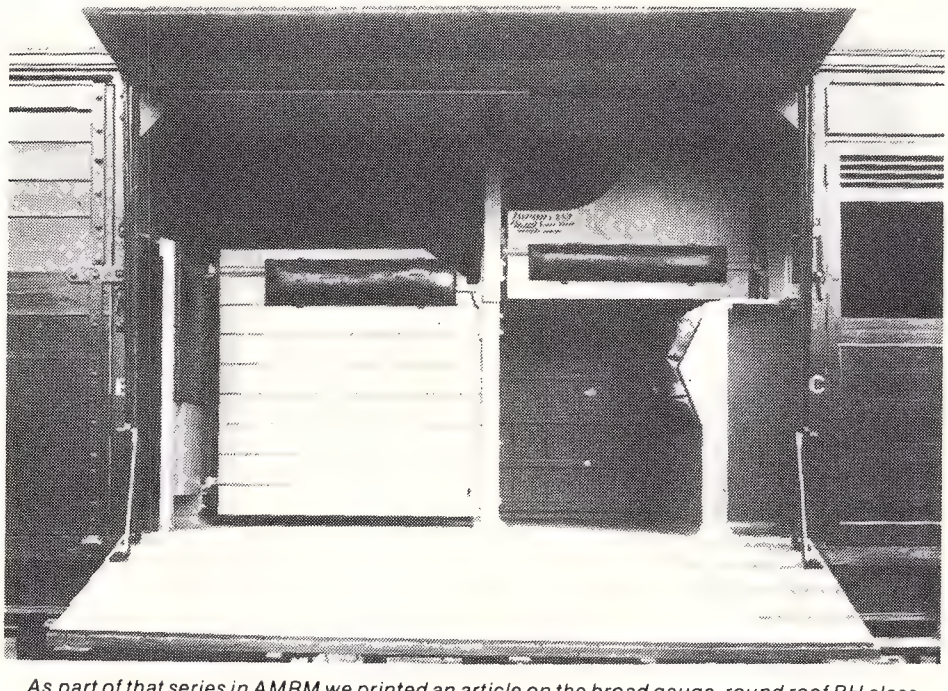
Valve Gear Construction

Each of the various rods comprising the Walschaerts valve gear are made from 2 strips of tinplate soldered together, filed to shape, with the ends opened out fork fashion, holes drilled, and then fitted (diag. 6). Bob has tried to make rods out of the solid but felt he did not obtain a reasonable result, so hit on the idea of using the two strips. This keeps the components down to a near scale size and so makes a nice finishing touch to a rugged and reliable mechanism.



Top side of chassis. Notice that assemblies such as the cylinders and drive shaft assembly are secured by screws rather than solder.

SAR HORSEBOXES



As part of that series in AMRM we printed an article on the broad gauge, round roof BH class (July/August 1978) with a photo of the interior of a VR horsebox to give an indication of horsey comforts. Since publication a photo of the 'real thing' has surfaced so here 'tis.

'Faster, Turkey!'

TRADE PRACTICES ACT 1974

The above act is now in force and contains strict regulations on advertising.

It is not possible for this company to ensure that advertisements which are published in this magazine comply with the Act and the responsibility must therefore be on the person, company or advertising agency submitting the advertisement for publication.

In case of doubt, consult your lawyers.

SCR Publications.

PROTOTYPE PLAN

Victorian Railways' X Class 2-8-2

X34 in action drifting between Wandong and Kilmore East near the site of Mathieson's siding, on a down empty livestock train. Photo J. L. Buckland.

In 1921 a Royal Commission on Gauge Standardisation was held, and as a result it became Victorian Railways' policy that all locomotives designed after 1923 were to be capable of conversion to standard gauge.

When additional heavy goods locomotives were required during 1925, the design was based on the C class 2-8-0's. Because the C's had long narrow fireboxes between the frames, they could not readily be converted, and as a result the X class 2-8-2 was designed with a large boiler and wide firebox positioned behind the coupled wheels.

The design proved a success and twenty nine engines were built between 1929 and 1947. A further fifteen were on order from the Clyde Engineering Company during 1952. This order was cancelled due to the dieselisation program. The locomotives in this batch were to have many features in common with the R class 4-6-4 locomotives.

A major feature of the class was the fitting of booster engines, a small two cylinder steam engine which gave an additional 9000 pounds tractive effort. It was fitted below the cab and drove the trailing truck through gearing. X36 was the only engine in the class not fitted with a booster.

The exhaust for the Franklin booster was moved about during the life of the X class locomotives. Originally it was carried by an external pipe along the right hand side platform to the blast pipe in the smokebox. This system caused turbulence in the smokebox and so was later modified to exhaust independently from a curved pipe leading up to the boiler centre line, over the firebox.

In 1930, X27 and C15 were involved in comparative performance tests. As part of these tests, X27 ran for a short time with the booster discharging independently behind the chimney.

X35 ran a series of trials in 1938, with the booster refitted in the smokebox to a new type of blastpipe. This modification was later fitted to all locomotives in the class, except X36.

Various improvements were made to the design as new batches were built, and then fitted to earlier locomotives as they became due for major overhaul.

Modifications fitted in this manner were —

- Modified front end, starting with X33 in 1938;
- Belpaire boiler and copper firebox to X28 in 1942;
- All steel boiler to X33 in 1943;
- The first slotted plate cow catcher to X49 in 1952. This was as the result of an accident.

When built, X38 through to X41 were equipped with the tenders originally used on the S class Pacifics before streamlining.

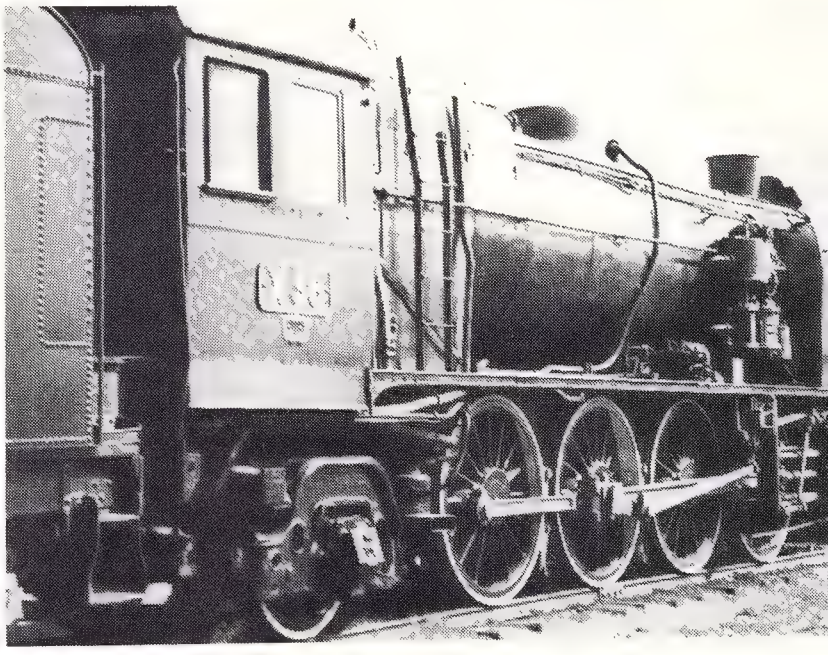
The first loco entered service on 19-3-29 and the last on 24-10-47. Withdrawals started with X43 on 31-8-55, and the last of the class to be withdrawn was X36 on 26-11-60. This engine, the odd man out of the group, is preserved in the Australian Railway Historical Society mu-

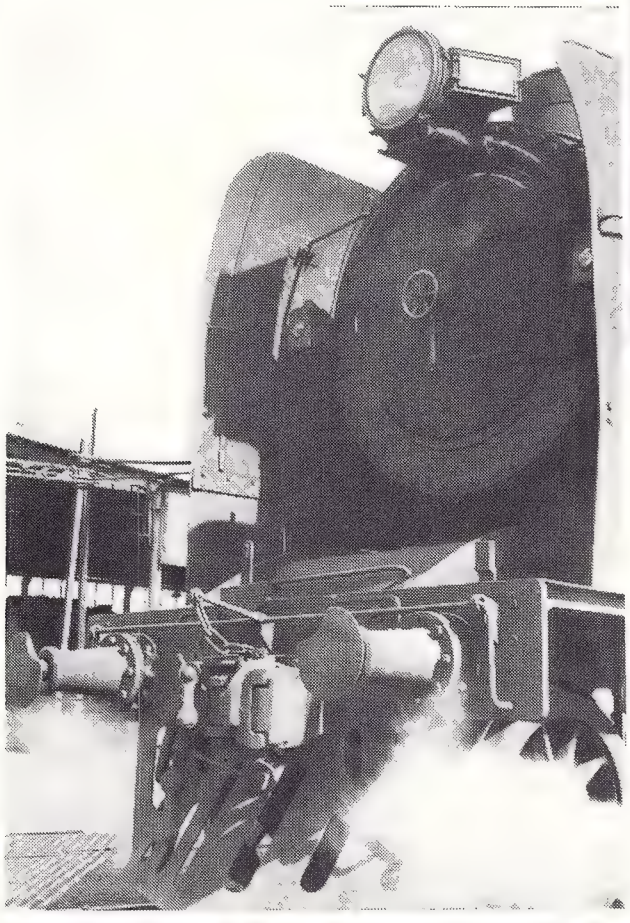
Builders' photos of X28 showing both sides, photographed on the same day. Victorian Railways' photos.

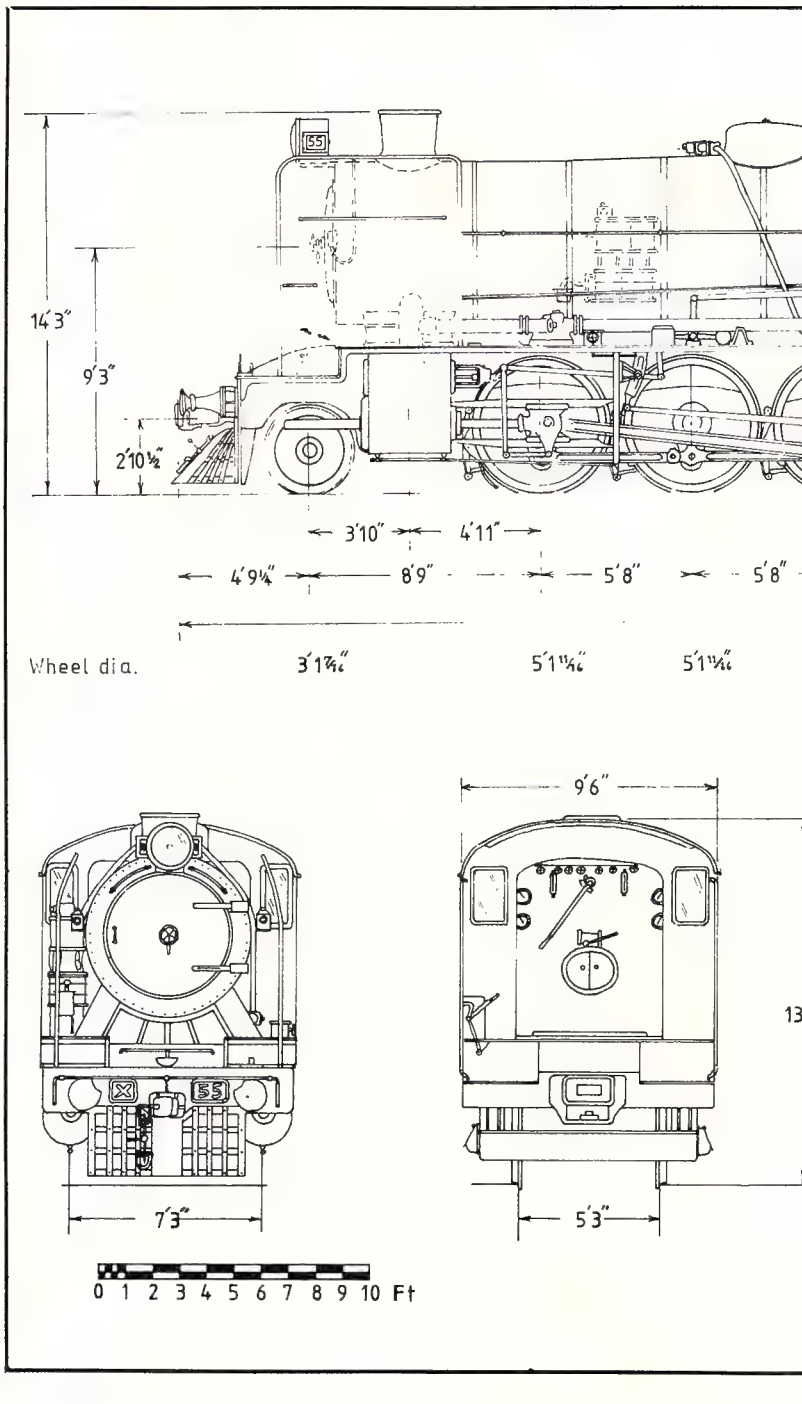
Below: X36 at North Melbourne 15/4/60. Photo K. Buckland.

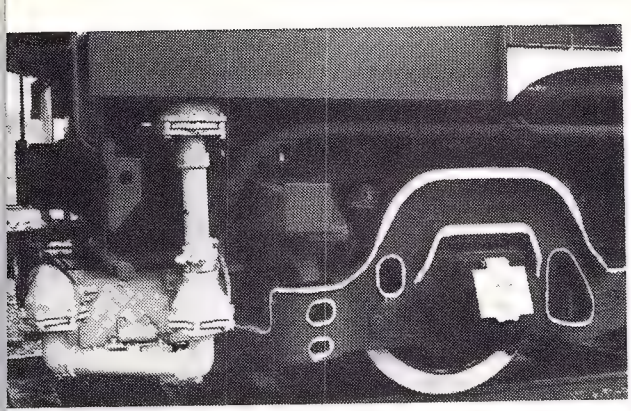
Bottom: X class cab, North Melbourne loco 1960. Photo K. Buckland.

Right: X36 at A.R.H.S. Museum showing "white-wall tyres" and lack of plumbing beneath the cab. Photo K. Buckland.

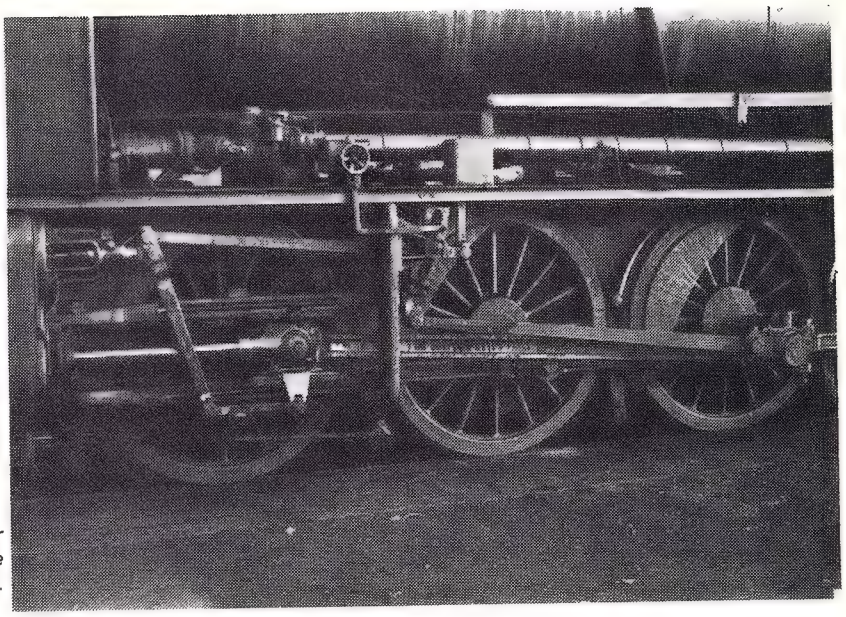






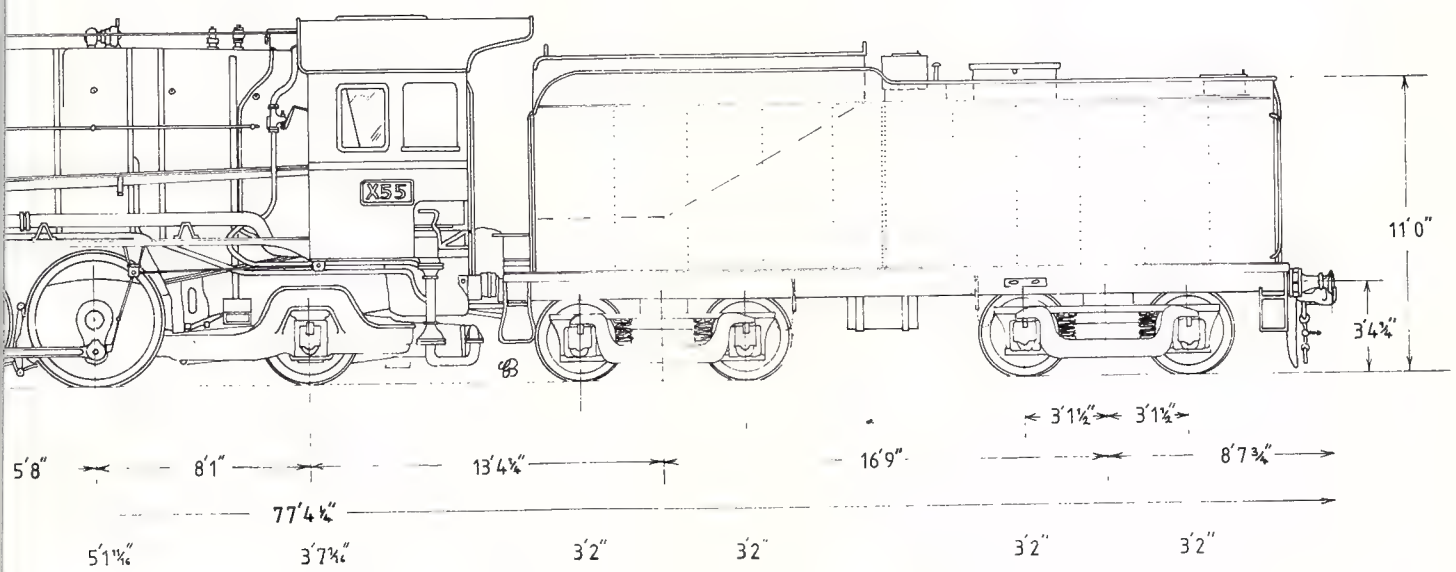


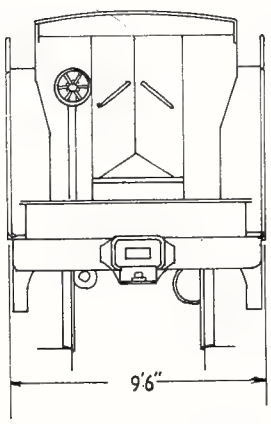
Above: X28 Close-up view of the booster engine and exhaust steam pipe with cast steel Delta trailing truck. Photo Victorian Railways/J. L. Buckland collection.

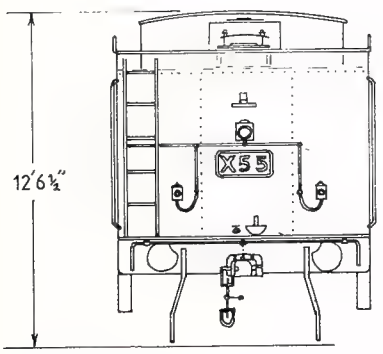


Right: X28 Close-up view of booster steam pipe showing booster throttle valve. Forward of the throttle valve is the steam turret valve for manual isolation of the steam supply to the throttle. Photo J. L. Buckland.

RIAN RAILWAYS CLASS X 2-8-2 LOCOMOTIVE







Drawn as running in early 1950's.

No's X27-55
Built 1929-47
at Newport.

SCALE 3·5 mm / 1 Foot

DRAWN	DRG. N°
G.J.B.	L17
DATE 24/11/79	

seum at Newport. Mileage recorded by members of the class range from a mere 262,454 for X53 to more than three times that for X34 at 837,963.

Whilst X36 was a one-off unit because it had no booster engine, X32 became another special because of its conversion to pulverised brown coal use.

The equipment was supplied by Henschel & Son, of Germany, and X32 was modified for tests in 1949. Static tests proved that an engine using pulverised fuel developed power equal to one burning Lithgow lump coal. By 1952 X32 had proved the success of the system, and it was planned to convert all of the X class locomotives. R707 was similarly converted in 1953.

Prices of oil fuel and high grade N.S.W. coal in 1957 made the brown coal dust burners uneconomical, so R707 was converted back to black coal, whilst X32 was scrapped on 2-8-57, thereby ending another chapter in the X class story.

Technical details
Class X 2-8-2
Number series 27 to 55
27 to 37 built at Newport in 1929
38 to 45 built at Newport in 1937-38
46 to 51 built at Newport in 1942-43
52 to 55 built at Newport in 1947

LOCOMOTIVE
Cylinders: 2 outside, 22" bore x 28" stroke;
Boiler Pressure: 205 psi;
Tractive Effort: 39,360 lb (85%) without booster, 48,360 lb (85%) with booster;
Factor of Adhesion: 4.28 (4.4 with booster);
Valve Gear: Walschaerts piston valve; Valve dia., 10"; travel, 4⅝"; lap, 1 1/16"; lead, ¼";
Boiler: grate area, 42 sq. ft.; firebox heating surface, 199 sq. ft.; syphon heating surface, 52 sq. ft.; tubes heating surface, 2,364 sq. ft.; superheater heating surface, 492 sq. ft.

TENDER
Coal, 9 tons; water, 8,600 gallons; PBC, 10 tons 4 cwt.; water, 6,600 gallons.

Roadworthy weight:
Loco, 102 tons 19 cwt.; 98 tons 14 cwt. without booster; tender, 82 tons 8 cwt.; tender, 82 tons 18 cwt. (PBC burner).

Max. axle load:
20 tons 18 cwt. (rear tender bogie); 19 tons 2 cwt. (on rear pony truck axle).

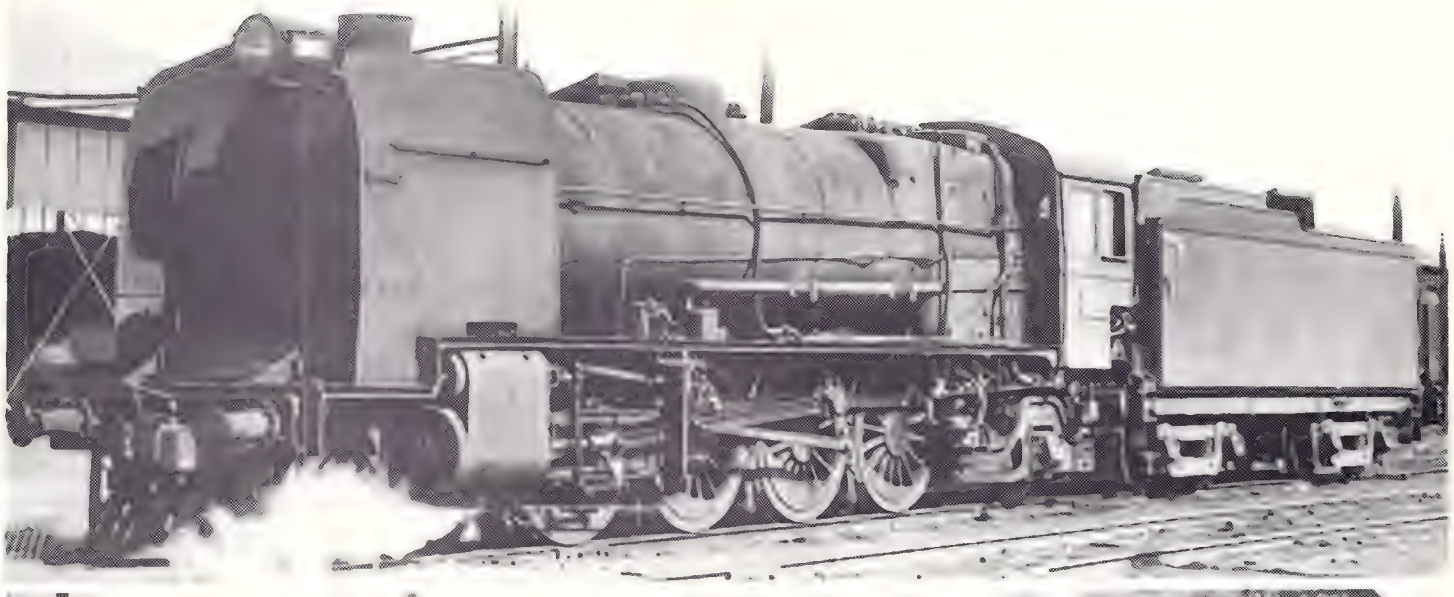
Max. permissible speed:
50 mph (60 mph on passenger trains when specially authorised).

Text prepared by Phil Jeffery, using information previously published in the Victorian Railways' booklet Power Parade, as well as books by Stephen Watson, "The Era of the C & X Class Locomotives" and "The Era of the R Class Locomotives". Plan by Graeme Brown.

Top: X50 at Spion Kop on up Glenroy goods 18/9/58. Photo K. Buckland.

Centre: X29 down Seymour goods, 2/5/56. Note: Larger Booster pipe. Photo K. Buckland.

Bottom: X27 at Spion Kop 18/9/58. Photo K. Buckland.



Top X36 at North Melbourne 15/4/60 Photo K. Buckland

Bottom X38 at Spion Kop 3/12/58 Photo K. Buckland

Top Left: X36 at North Melbourne 15/4/60. Note: type of water stand. Photo K. Buckland.

Bottom Left X43 close-up showing the fabricated trailing truck frame and booster steam pipe. Photo Victorian Railways/J. L. Buckland collection.

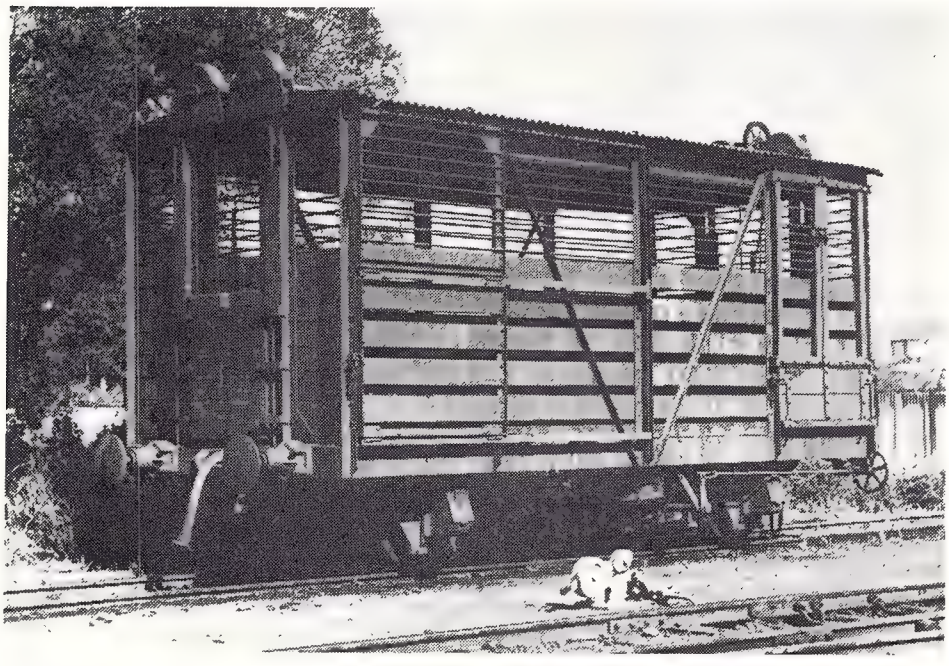
Top Right: X50 Up Glenroy goods at Spion Kop 18/9/58. Photo K. Buckland.

Bottom Right X54 Bendigo loco 1959 Photo Dr P Fisher/K. Buckland collection.

STOCK WAGONS OF THE TGR

- Article prepared by — Ross Hurley
- Information supplied by — Tony Parnell, Allan Willox
- Photos — Tony Parnell unless noted
- Draughtsman — Tony Parnell

Part 1 was printed in November/December 1980



Side and end perspective of HG 3. Note the floor lifting apparatus as fitted in the 1954 to 1960 period.

The HG Class Sheep/Cattle Wagon

From 1954 to 1956, five HG Class combined sheep/cattle wagons were built, from new, in the Launceston Workshops. They were numbered HG 1 to HG 5, and were built on the TGR standard 20' - 0" steel underframe, as on the EP, EVP etc. vans. They were fitted from new with an 18 inch vacuum brake cylinder.

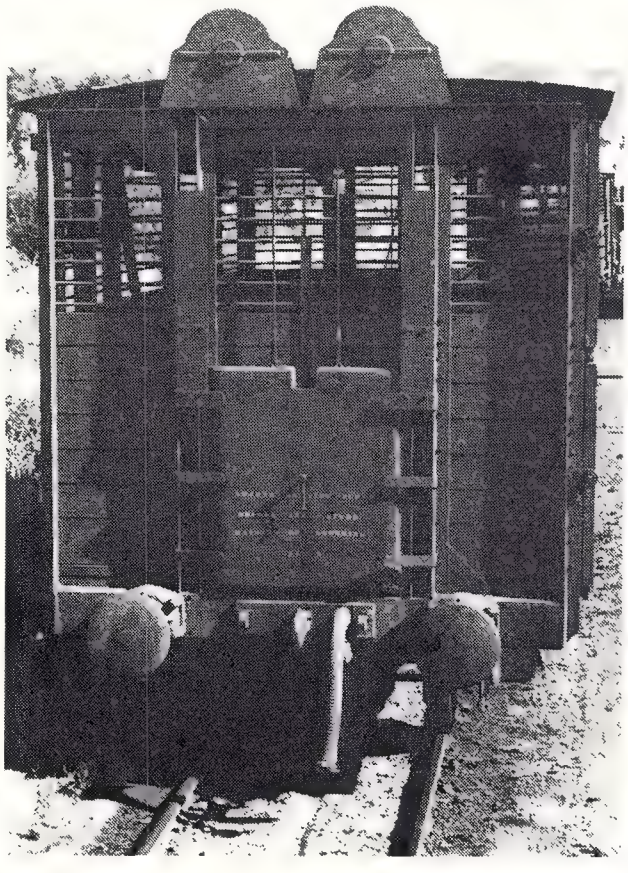
In addition, the vehicles were built on a form of radial axle, the Grover bogie, and fitted with a movable middle floor that permitted them to be used to carry either sheep or cattle. The middle floor was operated by a hand chain and worm drives, with a counterweight sliding up or down each end of the vehicle. With the floor lowered to the middle position the vehicle could carry sheep only. When raised to the roof, it could carry sheep or cattle.

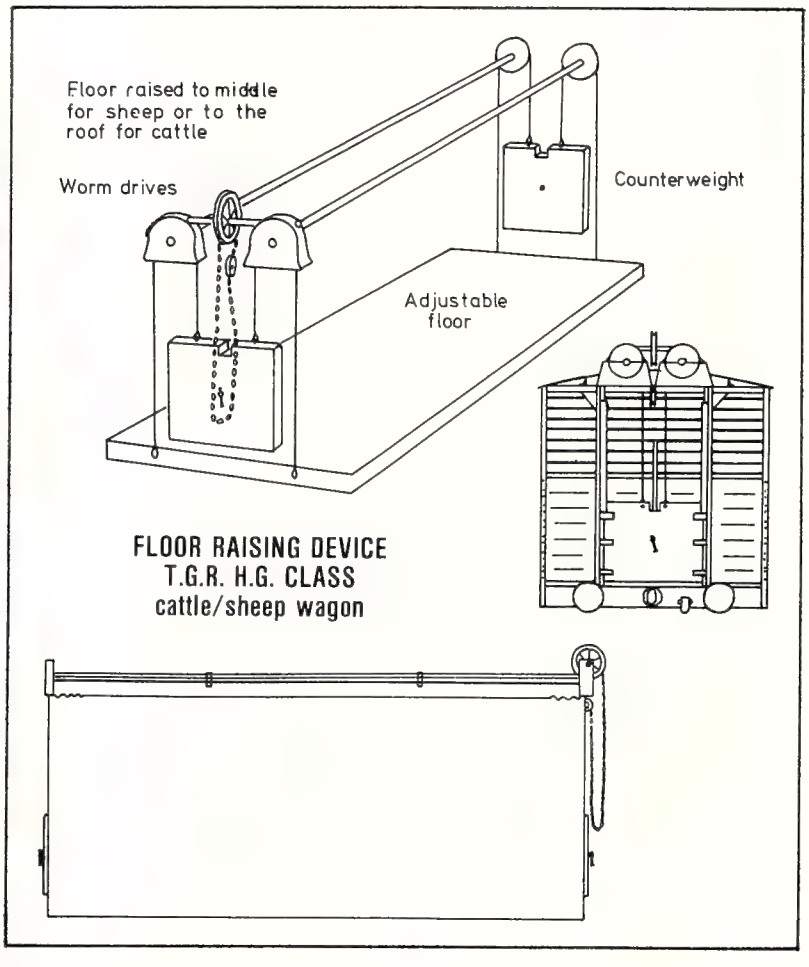
All data to hand, including the outlined diagrams, rate the vehicles with a 10 ton load. Note, however, the photgraphs of HG 3 showing the floor raising apparatus, in Launceston yard, taken somtime between 1954 and 1960. They show a load rating of 8 tons.

Between 1960 and 1962 each wagon was converted to I G Class, by making the middle floor a fixture and removing the raising gear. They were then used for sheep traffic only.

Later, in March 1966, the vehicles were re-converted to HG Class, for cattle only traffic, by removing the middle floor entirely, and all the suspension gear.

All five wagons were still listed in active service in the 30/6/76 Stock List, but were all subsequently written off between July and October 1978. At least two, however, were still in a Launceston siding in September





— Part 2

1979. And adding more confusion to the load capacity question, they were also noted with 8 ton markings.

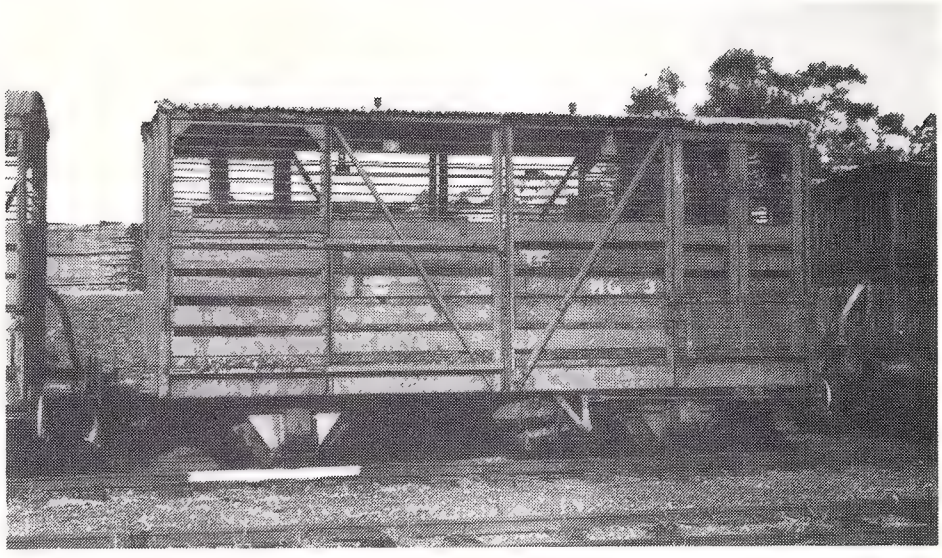
The Grover's Bogie

In the early days of railways, the short four wheel wagons and short trains had little trouble traversing curved trackage. In the 1860's, as stock grew longer, and moved from two axles to three or four axles per vehicle, various systems were devised to turn, or radiate, the axles.

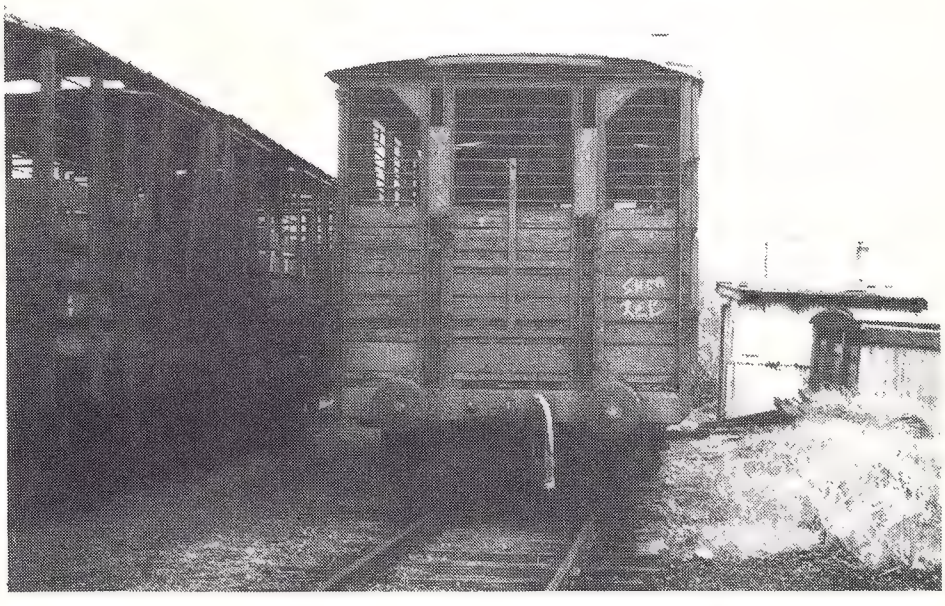
On the 3' - 6" gauge lines of Tasmania there were numerous sharp curves, and, like Queensland, the TGR adopted one of the more successful radiating axle systems, the Grover Bogie, for some of its longer four wheel stock. Like modern day bogies the idea was to keep each axle as close to perpendicular to the track centreline as possible at all times, which meant some sort of pivotting action on curves. The Cleminson system was another of the relatively successful designs, for six wheel stock, and was used on a number of Australian railways.

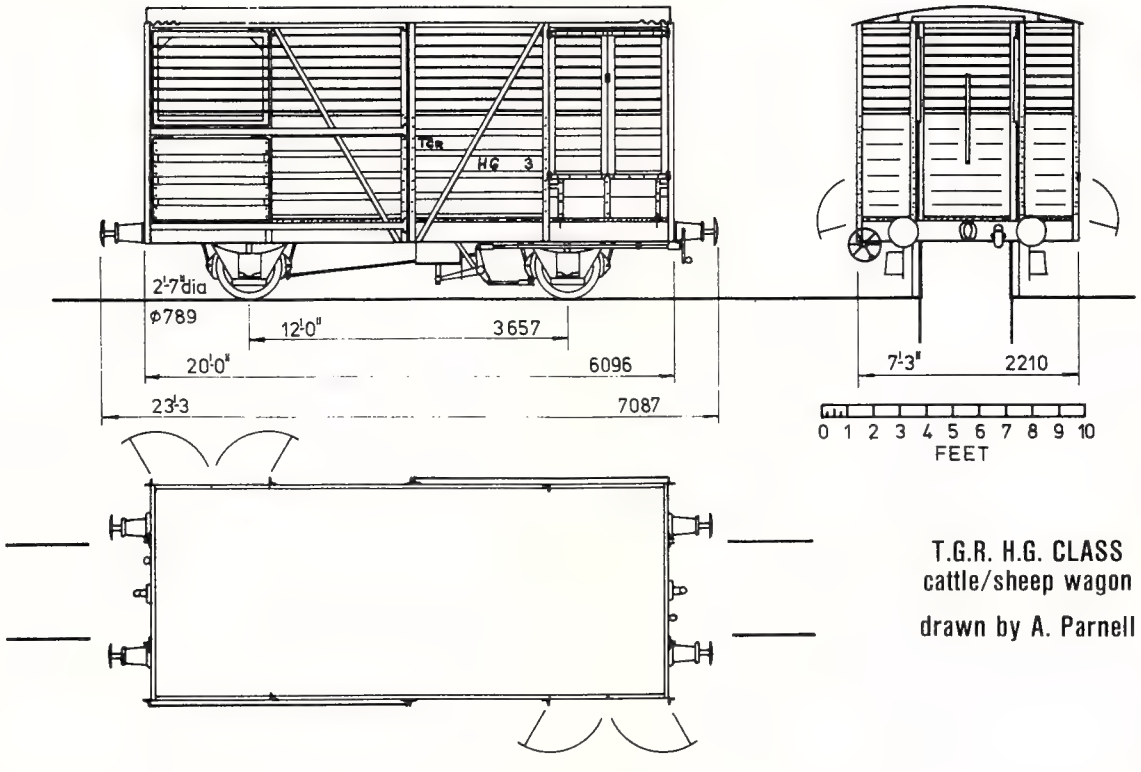
A Grover bogie wagon is essentially a four wheel vehicle, but each axle is held in its own subframe, and pivots at its centre. The opposite ends of these two wheel trucks are linked with crossbracing. In a curve the trucks pivot. The movement of the first to enter a curve causes, through the cross-bracing, the movement of the other, but in the opposite direction.

The method was first tried, on UK railways, in the 1870's, and it is known to have been fitted to NZR carriages in 1876. They reported them as being more satisfactory than other four-wheelers because of their greater comfort and less flange wear. The QR commenced using the system in 1879, and became one of the most extensive users of the system in the world. The TGR used it on at least 12 classes of freight wagons, many of



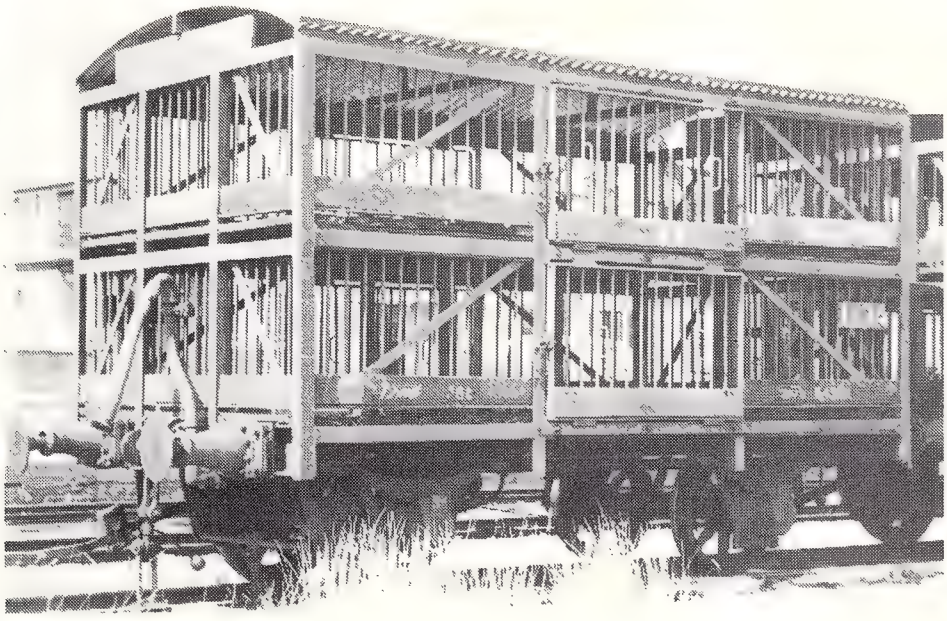
These two photos show HG3 after the lifting apparatus had been removed.

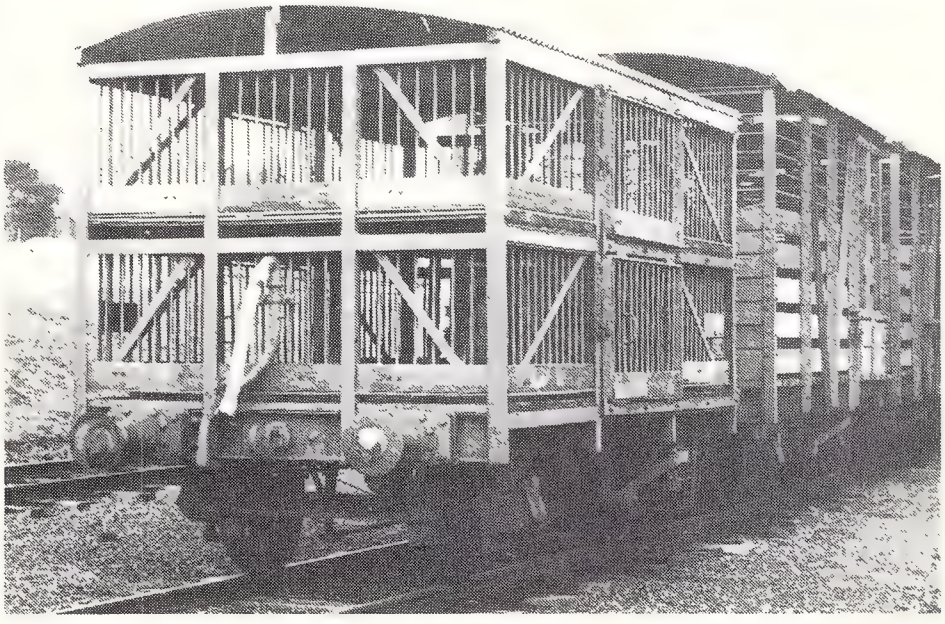


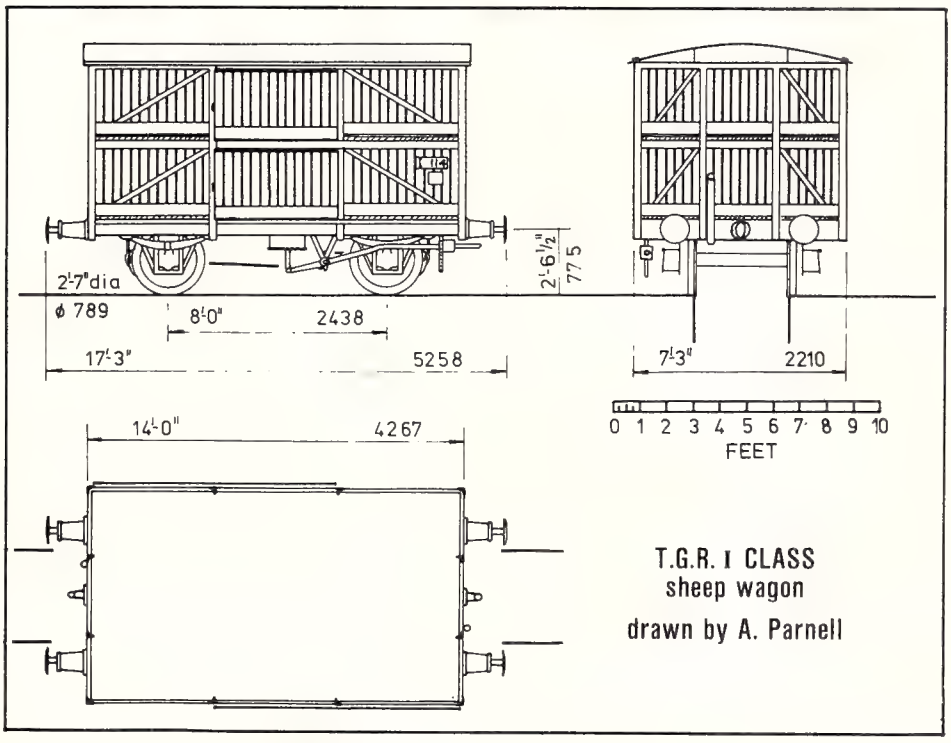


T.G.R. H.G. CLASS
cattle/sheep wagon

drawn by A. Parnell







Left: *TGR I 34 showing the non handbrake side.*

Left Lower: *TGR I 108 showing a different treatment under the arch of the roof.*

which are still in current service.

The I Class Four Wheel Sheep Wagon

These were built with two floors, and initially rated to carry seven tons. They were down-rated in 1949 to six tons. There were a total of 126 built, over the period 1885 to 1967.

The first batch of 50 were built from 1885 to 1892, from imported steel underframes and locally built bodies. Vacuum brake cylinders were fitted, as built, to later vehicles, with earlier ones being fitted on a convenient basis. They initially cost £134 each.

The next batch, numbering 50 to 85, were built from 1922 to 1923, from steel frames made by the Perry Engineering Co. in South Australia, and bodies by the Locomotive Workshops, Launceston. These cost £431 each. These, and all subsequent vehicles, were fitted with brake cylinders.

1939 saw another batch built, numbering 86 to 105, again from Perry underframes and local bodies. A number were charged for accounting purposes to other lines. One of the group 32 to 38 went to the Strahan — Zeehan line, and the balance of six were recorded as having been charged to the Sorell line. Five in the group 39 to 49 were charged to the Brighton line, and the balance of six to Chudleigh.

In 1960 need arose to build more, so numbers 106 to 118 were built, this time on frames from old A Class two-plank open wagons. Even so the price had climbed to £598.

In 1966 and 1967 the last batch, numbering 119 to 126, were built, this time on slavaged underframes, some or all of which may have been wood. One imagines the TGR winced, though, at having to pay $1,200 for them.

These vehicles were used for the conveyance of superphosphate also, but whether they were designed to do this from the beginning is not clear from the records. The practice commences from at least 1949.

No conversions are noted in the records, but write-offs commenced in earnest about 1963, and for the next eight years or so most were taken off the books. The wagon stock list for 30/6/76 shows 27 left in service. Most of these are of the second-last batch to be built; the salvaged underframes of the last batch apparently not standing up as well as the A Class underframes, as most were written off in the 1970's.

The Proposed HS Class

It is interesting to note that an HS bogie sheep wagon was designed on the same lines as the HC, i.e. two I Class wagon bodies to be placed on CC underframes. They were to assist with the removal of all old four wheel wagons from the TGR system, and replace them with bogie wagons.

Train loads were (and still are) increasing, and modern stock is being fitted with auto couplers. The old stock cannot stand the new train loads. All old four wheel wagons have now been banned on the system, except for emergencies, etc., and it is planned to eliminate all Grover bogie wagons as conditions permit.

Livery

All the cattle wagons — for that matter nearly all the TGR wagons — are painted red oxide (very similar to Sydney Suburban electric trains), with white lettering. Underframes, buffers and bogies, if painted, are usually flat black, or, in recent cases, silver.

For more details on the TGR stock wagons turn to page 41.

AUSTRALIAN RAILWAY SIGNALLING

Sixth in a series by Arthur Perry.

Previous articles in this series are:—

An introduction to Railway Signalling	*Mar/Apr 79*
Railway Signalling Terminology	*Jul/Aug 79*
Auto Single Light Signalling	*Sep/Oct 79*
Auto Two Light Signalling	*Nov/Dec 79*
Mechanical Signalling	*May/Jun 80*

TRAIN ORDER WORKING

This is among the simplest systems of railway operation and is usually only found on lightly trafficed single-line sections. Commonly associated with railroads of North America it is found, or was, on some Australian railways

The VR used "Train Section Orders" on up to 560 route km between 1926 and 1952. But we will deal with the former SAR's "Train Order" signals of U.S.A. origin, one of the products of the Webb era. Known in U.S. parlance as Train Order Boards.

A three-position upper quadrant semaphore with what appears to be a badly bent arm is provided for one or each traffic flow controlled. Where two arms are provided they are mounted back to back at the top of their post. If the station is cut-out periodically a yellow lamp is mounted below the arm (s) on a swivel base that can be rotated horizontally through 90° by the station staff by climbing the signal ladder.

Train-orders are given to a station by telephone from the Train Controller or Despatcher and they are written by the station staff (signalman, S.M. or Porter in Charge) onto a pad of Train Order forms which provides additional carbon copies. Copies are then passed to both driver and guard of the train (s) concerned. The orders can vary in their degree of importance.

If receipt of the orders is not critical they may be picked up at reduced speed and the signal will be placed at 45° (above horizontal) and show a yellow light by night. This is called a caution signal.

Should receipt of the orders be imperative the signal is placed at 0° (stop) and shows a red light by night. In this case the train must stop and the crew then sign for the orders.

When there are no orders to be collected the signal is placed at 90° (clear) and shows a green light by night. If the station is closed the lower lamp is swivelled to show a green over yellow aspect by night. These train-order signals may or may not have ordinary signals provided at their station. At Riverton one train-order signal is provided amongst many other ordinary signals, it being for trains to the Spalding branch.

The Queensland Railways use Train-order working on the Southern Railway west of Roma, the Greenvale Railway and at one stage the Goonyella line from Gladstone.

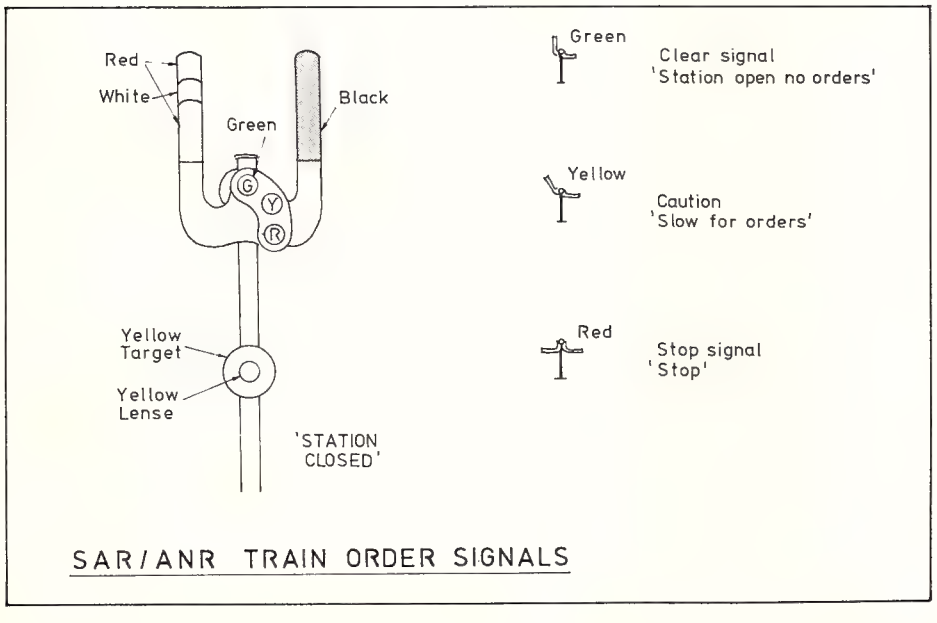
The three diagrams are largely self-explanatory, but some explanation may be desirable. The "beacons" are basically equal to a N.S.W. "landmark", requiring drivers to always pass it cautiously. The "limit of shunt" boards define just how far a train may shunt outside the crossing loop, while the "yard limit" board warns an approaching train it could encounter another train shunting "within yard limits". These are provided whether the loop/yard is protected by "home" signals or not.

The "clearance point" boards simply indicate how far back a train must be to avoid fouling another train taking the other road at the passing loop.

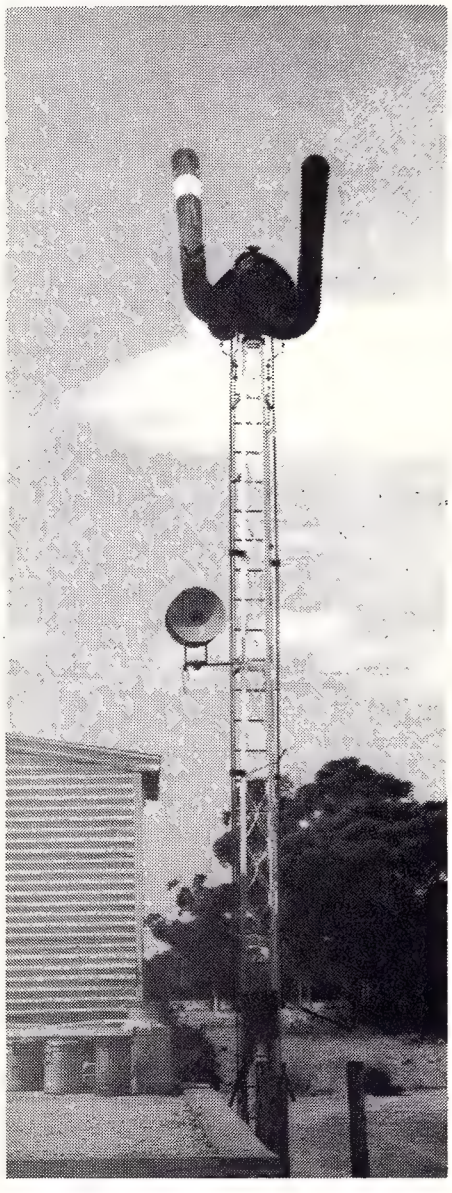
The "trailable facing points indicator" is a feature peculiar to the QR, where passing loops may have facing points locked for oncoming traffic but trailable for movements leaving the loop. This avoids wasting time resetting the road behind a departing train, but requires trains in one direction to mostly enter the loop. A special target is provided on beacons in such cases to forewarn the drivers.

The Greenvale Railway version can be likened to a simplified form of CTC (Centralised Traffic Control), despite the lack of remote-controlled signals and turnouts. Special train-order telephones with flashing blue lights controlled by the train controller are provided at loops to permit contacting train crews. Two-way radio communication will probably supercede these phones eventually.

Modellers of the QR or SAR have in these systems a simple, effective and prototypical method of controlling a simple home layout or a branch line on a larger layout. Ideal for the average modeller who tends to shy off signalling, though they will have to manufacture all the parts required themselves.



SAR/ANR TRAIN ORDER SIGNALS



S.A.R. twin "Train Order" signals with yellow lamp below, for when the station is cut out. Photo by R.T. Taaffe at Parilla (Pinnaroo Line) on 31/3/72.

LOWER QUADRANT SIGNAL CONSTRUCTION

by Ray Pilgrim

The search for a lower quadrant signal motor which was both economical and simple to make led to the following design which is reliable, once adjusted, and "fail safe" in operation (i.e. if a loss of power occurs the signal goes to Stop). It can be operated on either AC or DC; it works on 18 volts DC on the "Bylong" layout.

The signal used was a Ratio LQ/60 tapered square post lower quadrant suitably modified to NSWGR appearance.

List of Materials

1 ¼" x 2" hex. head smoothshanked bolt
2 ¼" nuts
1 plastic "Singer" sewing machine bobbin
2 small brass eyelets
1 brass coated steel thumb tack
1 spool No. 38 gauge insulated wire (enamel coated)
1 pack 5 minute epoxy
1 signal
1 roll of brass picture hanging wire
1 packet small fishing sinkers (round)
1 mounting bracket to suit (see text)

Motor construction

1. Take the ¼" bolt and file any bumps or letters off the top of the head. Slide a plastic bobbin onto the bolt hard up against the head; if necessary, glue in place. File a small "V" in the lower outer edge of the bobbin.
2. The next step is to wind on the wire. This can be accomplished in several ways: in a hand drill held in a vice, a slow running power drill or, as I did, in a lathe with motor speed control attached. Thread the wire out of the small hole on the lower side of the bobbin and carefully tape to the shaft of the bolt. Wind the first few turns onto the bolt by hand till it holds tight (first check the motor direction). Now, wind on the wire very carefully, avoiding damage to the insulation until the windings are about 1mm from the outer edge of the bobbin. Place the wire in the groove on the lower edge then tape about 15mm to the shaft of the bolt. Coat the windings with 5 minute epoxy and allow to set.
3. Carefully remove the tape, clean the insulation off the wires and solder to the brass eyelets. Now glue the exposed wires and ends of the eyelets to the bobbin. Cover the wires completely for protection.

Signal modifications

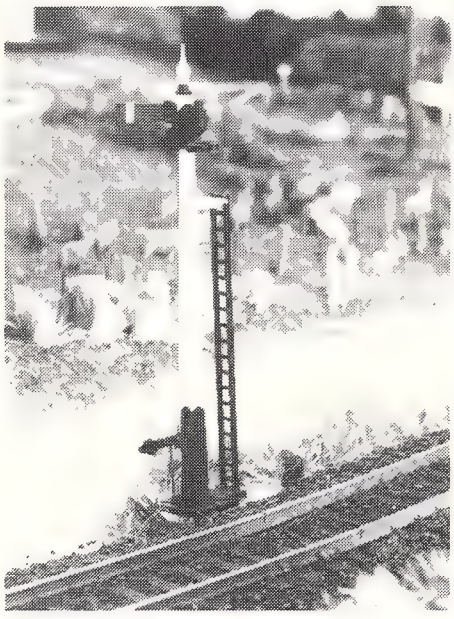
1. Drill two ⅛" holes in the base of the signal beneath the holes in the counterweighted lever as shown in the diagram.
2. Attach a piece of straight brass wire to the counterweight end of the lever (see diagram) and weight using small sinkers to pull the signal to the Stop (horizontal) position. Use as little lead as possible but be sure to obtain reliable operation.
3. Drill two holes for mounting screws in base of signal.
4. Finish construction of signal as per Ratio's instructions.

Installation

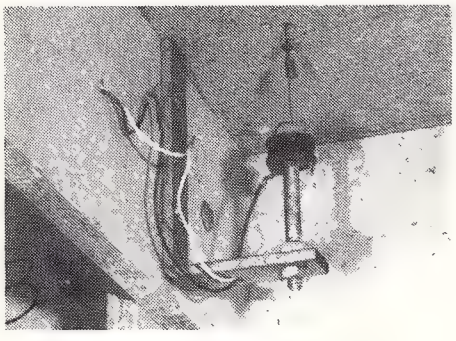
1. Locate the signal position and drill a ½" hole in the baseboard.
2. Make up the operating arm and attach to the signal as in the diagram.
3. Mount the signal over the ½" hole in the baseboard.
4. The signal motor requires a ¼" hole in the mounting directly below the hole in the signal base, about 4" down. I used a bracket. However, a flat plate screwed to the layout frame and drilled ¼" would provide a more universal mounting.
5. Screw one nut onto the bolt, then place the bolt through the mounting and screw on the second nut. By screwing these nuts up and down the bolt we will get adjustment of the signal arm throw.
6. Adjust the coil up to the operating rod with the signal held in the Clear (down) position.
7. Wire to a switch, relay or point motor and turn on. Adjust the coil for correct signal throw if necessary and tighten nuts.

Notes

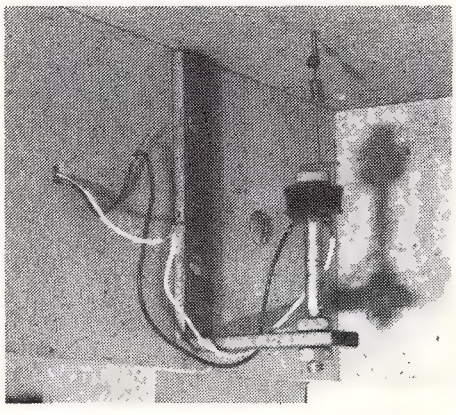
1. If the signal vibrates or buzzes then the thumbtack is not sitting flat on the top of the bolt. Adjust so that the wire on the operating rod is vertical to the thumbtack.
2. The coil will draw about 55 milliamps and have a resistance of about 220 ohms. This will allow a 1 amp transformer to run 18 signals if all are on at once. Obviously the more signals that are off at any one time then this number will increase.
3. If there is not sufficient power (if using 12 volts) to change a signal a second coil can be made up and placed in series on the same bolt. Alternatively, cut off one side of two bobbins and glue into place on bolt to form a larger bobbin, then wind on wire to fill as before.
4. Multiple arm signals (brackets, etc.) would need bell cranks mounted on the baseboard to move the operating rods to give enough clearance for the extra motor/s below the baseboard.

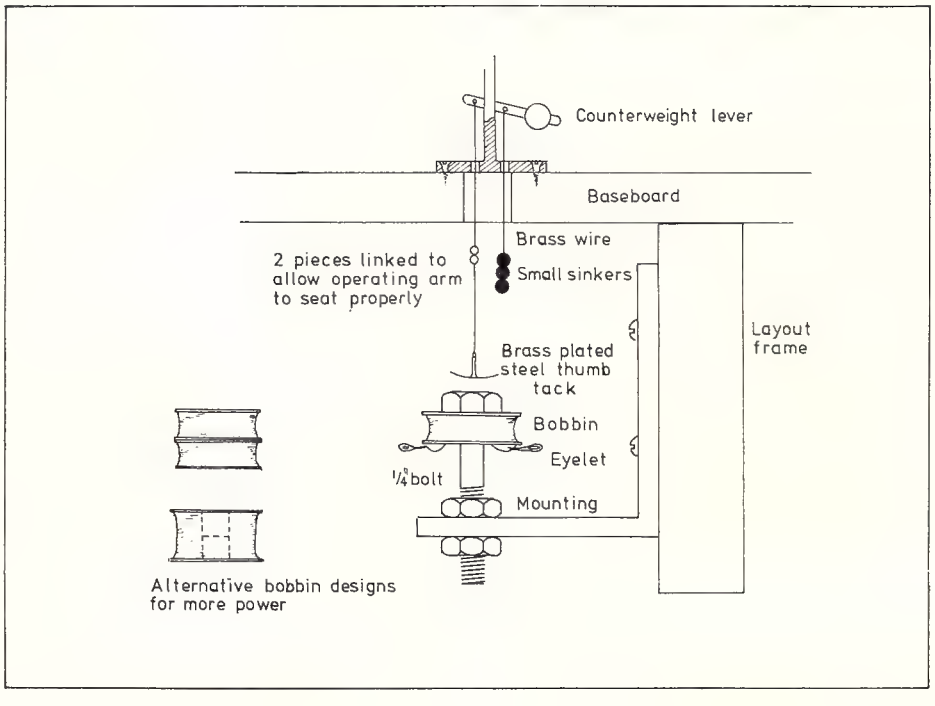


STOP, is the message this lower quadrant signal indicates to trains travelling into BYLONG. A. Brown photo



The 'motor' mounted under the layout, attached to the baseboard.





STOCK WAGONS OF THE TGR — EPILOGUE

The long history of stock carriage on the Tasmanian railway systems, which dates back to the early privately owned L&WR and TMLR systems, came to an end in October, 1978, when the ANRC discontinued the carriage of livestock. This brief article is designed to complement Parts 1 and 2, thus completing the story of Tasmanian stock wagons.

H class

Forty-one wagons remained on roster at 30.6.78, and all remaining wagons were written off on 11.10.78. However, many wagons were stored before this date, with nine noted at Railton and four noted at Mowbray in July 1978. The largest number of wagons stored at any location was 22 at St Leonards; this batch included H2 and H9 dating from 1885 and 1886 respectively, although both wagons had been modified with sliding doors and substantially rebuilt. The four wagons at Mowbray were cut up in situ in early 1979, while the remaining wagons were towed to George Town for cutting up. Two wagons (H117 and H148) have been preserved by the Van Diemen Light Railway Society at Don.

I class

Twenty-six wagons remained on roster at 30.6.78, all being written off on 11.10.78. Eight wagons were stored at Railton, five at St Leonards and three at Mowbray. The latter were cut up in early 1979, with most of the others being cut up at George Town. Three wagons remained in September, 1980. I106 has been preserved by the VDLRS, I67 was stored at Barnards Creek, while I112 resided intact on Launceston's scrap heap. The latter two wagons were scrapped by November, 1980.

HG class

HG3 and HG5 were stored at Mowbray and were written off on 18.8.78. The bodies of these wagons were noted on a farm near Westbury in June, 1979. HG2 and HG4 were stored in the old stock truck washing sidings at Launceston for some time, and were moved to the area adjacent to Launceston roundhouse for scrapping in August, 1980. The frames were cut off these wagons, but the wood and metal bodies were still substantially intact in September. HG1 was stored in a derelict condition at Barnards Creek for a number of years before being scrapped in November, 1980.

HA and HC classes

Following the cessation of livestock carriage, all HA and HC wagons (except HA1) were converted to flat wagons, retaining part of the stock wagon ends. Twenty-one wagons were fitted with stanchions and small timber bolsters for timber traffic, and were classified FK. Five HC class wagons were converted for use in sleeper traffic and were numbered FS23-FS27. The FS conversions were done in October-November, 1978, and were followed by the FK conversions between November, 1978 and April, 1979. As at 30.6.79 only one wagon (HA1) remained on roster, officially stored. However, the frame of this wagon was noted in the scrap heap in Launceston in early June, 1979, the class thus being extinct.

HB, HB+, HBG and C class elephant wagons.

As noted in previous articles, none of these wagons survived past the early 1950's.

Facilities

The stock yard was a feature of most of the larger stations and many sidings throughout the system, and the cost of their maintenance was cited as one of the main reasons for discontinuation of livestock carriage. Since 1978 most of these facilities have been removed, their former presence being usually marked by a short concrete-faced earth platform. The sidings at Abbatoirs on the Risdon line have been lifted, but the siding at Kilafaddy Abbatoirs, south of Launceston, remains in situ. Only in rare cases do facilities at other sidings still exist. The wagon washing plant at Launceston was still in existence at the time of writing, but little remains of the plant at Granton, north of Hobart. The demise of livestock transport in Tasmania has been swift and complete. Of the nine classes used in livestock traffic (all of which have been covered in various issues of AMRM, and excluding those of the TMLR and L&WR) only three complete wagons have been preserved, while only a handful of bodies remain on various farms as reminders of the past.

Michael Dix

MAIL BAG

Sir,

I refer to an article, "Seeing is Believing!" on page 42 of the July/August 1980 issue, which article, following a discussion with one of the A.M.R.M. staff, I understand was written to illustrate that full-sized railways sometimes do things that, in the world of model railways, is often criticised with the comment "but it is not prototype!". I would certainly agree with the concept of the article, particularly since many modellers, to me at least, often have rather narrow, simplistic views of what Scale 1:1 railways are really like. I would, however, offer the following additional information about two of the events described and give what I consider to be more logical reasons for such "unusual" events to occur.

re "A"-wagon, 11889

This wagon type was the second to have the "A" code, and first appeared in September, 1937. "A" 11889 was placed into service in December of that year, possibly replacing "D" or "S" wagon with the same number, removed from traffic earlier in the 1930s.

A number of "A" wagons were still listed in the 1963 edition of the Carrying Capacity book, although the class description had gone from the beginning of that book and the last wagon of this type was removed from traffic stock in February of that year. "A"11889 was, along with 38 other "A"-wagons, transferred to the "L" register of departmental stock, in December, 1962; the group of 39 being numbered L1371 to L1412 (excluding L1379, L1389 & L1392). If consecutive numbers mean anything, "A"11889 should have become L1375, but I am not betting on it.

I am not sure, at this stage, when 11889 was reallocated (ask Paul Rodgers, he probably knows), but it is shown as a BKX in the 1969 edition of the Carrying Capacity book.

Two problems remain:

1. The wagon clearly has an earlier history. For reasons explained in your article, the underframe and running gear are much older than 1937 and are probably pre-1900. However, where did it come from? The "A"-wagon in the 1941 Carrying Capacity book is quoted as 19'8½" long, which is some 2ft longer than the longest "D" or "S" and suggests that an old van underframe was used. There is no substantial decrease of vans during the 1930s, yet 231 "A"-wagons were introduced between September 1937 and January 1938.
2. How come the duplicated number? As we have seen, "A"11889 is no more, and the wagon concerned should have a number L1---- somewhere (although the paint has probably long gone). The problem then is with the cast number plate. When the present numbering system was first introduced in the early 1890s, wagons were allocated numbers by fixing a pair of cast metal plates to the wagon solebars. If the wagon was replaced, these plates would be transferred to the new wagon; this is how "A"11889 would have received a set in 1937 and should have had them removed (and a set with the "L" number fitted) in 1962. Current practice uses a pressed metal plate (like a car number plate) instead of the old cast ones, and I guess no one worries too much about the old plates nowadays. Even if it still has a traffic number on it, I doubt if anyone would seriously mistake old "A"11889 as a traffic vehicle!

Duplication of numbers was widespread in the past, particularly in the 1890s and up to the 1920s. Differentiation between new stock acquired as capital increase and that acquired as replacing obsolete equipment, meant that vehicles in the latter group usually also took over the running numbers of the stock being replaced. If, for some reason, the new stock was received and placed into service before old stock was officially condemned, the old stock would be classed as "duplicate" and carry an "X" after its now duplicated number to indicate duplicate stock. With the separate numbering of departmental stock into the "L" and "W" registers early this century, most duplication since then has occurred within those lists rather than in the register of traffic stock. I have, however, heard of a recent case where two batches of CHS wagons were placed into service with the same numbers, but that was a genuine case of error/slackness..

I would like to correct your caption to the photo of "A"11889 regarding the wheels. They look like they have split spokes, in which case the wheels are fabricated, not cast. Modern wheels are cast, but older ones were made up from component hubs, rims, tyres, spokes, etc. The split spokes are due to spokes actually being made "U" shaped and staked one against the other with their tops against the hub and the bottom against the rim.

re "LCH"13442

This wagon is listed as an LCH in the 1955 Carrying Capacity book, but is listed as a "CCH" in the next (1963) edition. This corresponds with the fact that "CCH" did not exist as a recognised class in 1955, but did by 1963. Some weekly notice in the period 1955-63 no doubt records the introduction of the "CCH" class, and another the conversion of wagon 13442. I suspect that this wagon, and a number of other "LCH"s may have operated with hungry boards (as pictured) for some period before the "CCH" class was defined as such, and these wagons were subsequently re-coded into that category without further modification. I also suspect that this photo was taken in that 1955-63 period befor the "CCH" class existed in print, although they did exist as a wagon type but still coded "LCH".

The key to this incident therefore is — when was this photo taken? I consider that a transposition of hoppers, while possible, would be highly unlikely under normal traffic conditions. An unloading crane can only lift one hopper at a time, and has to return it to the wagon frame before lifting another.

Trusting that the above will be of some assistance.

Allan Watson,
Sydney 2001

Sir,

Reference Phil Clarke's table of CUB sets on page 47 of the November/December, 79 issue. There are three errors which I would like to correct:

1. BL356 in Set 80 is duplicated in Set 85 which is in fact its correct location. BL395 should replace it;
2. RFL337 should be RFL377. 337 is/was a BL;
3. Set 86 is out of order and has an incorrect car. The correct order is: HFL383, BL338, BL394, RFL399, FL326, HFL336. Note that BL338 replaces BL395 which is in Set 80.

My information comes from Drawing No. 46316C dated 23rd November, 1943 and confirmed by two other unidentified sheets obtained from PTC sources.

Whilst I have pen, paper and inclination in close proximity there is another matter about which I wrote previously but which, for some reason (probably the mails), was not printed. It concerned the photos on page 32 of the September/October, 1979 issue. The R sets both Set 108 which was at

one stage the "Caves Express".

There were four types of HR built of which only two of the ten had five compartments. They were HR1354 and HR1400 and were used in Set 108. Mr. Nicholls, who queried the caption in the next issue, may well have been correct in his assumption that the photo was taken near Knapsack Viaduct rather than Cowan Bank.

I would like to add my six-penneth to the masses: AMRM is a top class magazine and the staff are to be congratulated. Keep up the good work fellas, your efforts are appreciated.

Eric Lundberg,
Castle Hill. N.S.W. 2154

Sir,

I write to support the suggestion by Alan Harvey Vol. 9 No. 12 for a regular section for the novice; bearing in mind that all newcomers to the hobby are not necessarily young people, finance and time are more readily available for such a hobby in the middle to later years for some people.

I am a novice builder and a new reader of AMRM having discovered an issue in a toy and hobby shop quite close to where I live; it seems they disappear from the shelves of the large city stores as soon as they are out on sale.

Considering the obvious difficulties there must be in getting a magazine together with the personnel scattered across the country, I think that the standard of AMRM is very good so please don't forget those of us who have yet to make a tree or a trackside shed because we are the loco and wagon builders of the future.

P. M. Clark,
Beaumont. S.A. 5066.

Sir,

With reference to the article 'A Speed Limit Device for Locomotives' in the November/December 1980 AMRM, a couple of small errors in the diagrams have occurred which could cause some confusion for constructors of the device.

Firstly, in the circuit diagram the MJE 2955 pin-out are shown E2, B1, C1. This should be corrected to E1, B1, C1.

Secondly, in the component layout diagram there is shown two terminals marked E2. The lower of the two, that is the one that resistor R4 connects to, should be changed to B2. Also in this diagram the printing process has made unclear the identification of resistor R3 (between E2 and B2).

J. S. Glastonbury
Pennant Hills 2120

Sir,

After haunting the local newsagent for about three weeks I finally found the November/December issue of AMRM. I must also add my name to the list of those singing praise.

I would like to add another suggestion to those of Norm Chapple regarding road vehicles. Woolworths, up this way, has the "Playart" range of die-casts. Two vehicles worth a second look are the bulldozer and the tractor with angledozer. They look about right but may need repainting. They cost around 75c each.

The "Tomica" range is available from Coles and K-Mart for about the same cost.

Greg Stephenson,
Margate. Qld. 4019.

Sir,

Regarding Paul Flynn's article about Murwillumbah, a Modelling Proposition . . .

There are a few mistakes about the description of the vehicles at Murwillumbah. They are as follows:

1. KLY container flats. The KLY is a louvre van built by Comeng of Sydney, with 2CM bogies under the vehicle;
2. The RACE containers are mounted on OSF wagons which are converted sheep wagons which were done at Clyde maintenance centre.

The two motor car carriers are coded MBY and fitted with marker lights on both ends. The car ramps are converted MLV underframes also built at Clyde maintenance centre.

D. O'Brien,
Seven Hills. 2147.

Sir,

There has been a lot written in this column over the last year or so concerning the quality of Australian made loco and rolling stock kits. The majority of letters on this subject have been critical, but this is probably because one is much more likely to put pen to paper after suffering the frustration caused by a poor quality product, than to write a letter saying that the product performed as it was meant to.

I didn't really want to enter the debate at all but I have recently been very disappointed at one kit I bought and later delightfully pleased by another, so I thought I would share the experiences in the hope that others might benefit from them.

First the bad news, which is the Weico Models N scale Spirit of Progress coach. I was really looking forward to this to start off my VR passenger coach fleet, but what a disappointment! The body shell is preformed but to me the bends are in the wrong places and it is next to impossible to get them correct while retaining the shiny uncrinkled surfaces of the metal.

The white metal castings for the coach ends, main frame and bogies are covered with flash, and generally speaking, are pretty rough. One of the coach ends doesn't have a recess across the top for the body to fit into. all the lugs on the bogie side frames are offset to one end (the same end) so that when one is turned around to make up a bogie, the lugs are not opposite each other and therefore do not fit into the cross piece properly. The air tank casting is not round because the two halves of the mould obviously were not correctly positioned. Instructions are absolutely minimal, and the hand-drawn sketch is poorly drawn and ambiguous concerning the location of underbody detail Those are the main problems.

Unfortunately I can't offer any constructive opinions as such; I can only urge the manufacturer to try to improve the product so that the buyer is getting value for his money (at over $13 it is a very expensive N scale kit). If the kit can be improved to that extent I can sincerely say that I will be one of the first to re-order it. But not before then.

And now, as the saying goes, from th ridiculous to the sublime. The Fybren N scale ELX kit is just beautiful. The injection mouldings are near perfect, as are the dimensions. The pieces fit together perfectly and a complete set of decals puts the finishing touch to a very authentic model.

Here is a kit that definitely represents value for money and I hope N scale modellers of VR are showing the manufacturers their appreciation in the appropriate way.

If the Fybren people are reading this, how about making the next one a VLX or BLX bogie van. I could easily use a dozen or so of them on the layout.

Lastly a word of thanks to all the hard workers who produce this magazine. It's a great production and I've got nothing but praise for it.

Tony Scott,
Mary Kathleen, QLD. 4827.

Sir,

With regard to Electric ('Overhead') Railway modelling, as mentioned in AMRM of November/December 1980: I for one am very interested, but not being a member of the club, can only speak for myself. As a dedicated modeller of Australian prototype, I have let my ideals slip enough to run Roco locos, being absolutley superb mechanism, with five-pole motors and flywheels (capable of climbing trees while pulling cows out of bogs), and am (slowly) preparing two Friedmont 46-class bodies and one 7100 to slip over their chassis. Already I hear the shrieks of the purists — a bit of a mismatch, true, but until now the best I've had to go on. I've found Vollmer overhead gear of high quality and competitively priced, compared to the several other overhead systems currently available and not difficult to acquire, as your local shop can get them in fairly easily.

And now we have the Toyman Imports 85-class limited run, consisting of an already painted brass body which will fit onto the Lima Dutch Electric mechanism, or you can improvise if you like. I have written to reserve two, as they are very well priced (at $89.95), and hope that other modellers of electrics will give the local industry some encouragement. I have found Triang subbies scarce as diesel droppings, and overpriced for the quality (well, they are Triang!), on the rare occasions they do appear, and, with all due respects, I would prefer products of a higher stand than the moulded suburban bodies currently available.

Hopefully, if the 85-class is a success, someone may take a punt on a 46, and even an E or an L, for our broad-gauge friends. There use to be a Triang loco which looked like a green Bo-Bo B-class with working pantographs, which with a bit of reworking could pass as a "near-enough" L-class, and Roco make an excellent quality German three-car overhead set which with a few mods would be at home in Brisbane.

Incidentally, Peco make inexpensive and inconspicuous copper stud contact strips for conversion of most brands of track to three-rail, and the Marklin pick-up shoe is very easy to fit to many locos or rolling stock. If you want cheap independent multiple running, or even constant power available for internal lighting, imagine the electrical permutations possible by superimposing 2-rail, 3-rail, and overhead, all on the same layout — oh, how the mind boggles! Why spend a fortune on electronic monsterpieces, and butcher locos' electrics? Roco and Marklin make single- and double-arm pantographs (I prefer Roco), and Model Dockyard for one stock these plus various other pantos by a number of manufacturers.

I'd also like to add my thanks and appreciation to the staff of AMRM for giving us philistines what must be the best model magazine I have seen anywhere, and hope that your interest and dedication persist, in spite of the rare but sincere grunts of approval from us, the apathetic but well-meaning majority!

Grum Smith,
Canberra. ACT. 2600

Sir,

At last I have finally got the pen to paper, owing to the January/February 1981 issue of the Australian MODEL RAILWAY Magazine. I must congratulate you for the fine work put into this copy; it is really an eye opener. The quality and presentation is superb! The kit-bash article by Peter Gibbs has stirred me up and luckily I found a SW15 body in amongst the bits and pieces and will have a go at making a 'Y' class, following his instructions as well as studying the plan in the magazine. The coloured photos of the diesels is a tremendous help when doing a paint job on a model unit of another state system. Many a time I have been stumped about the right shade, expecially when it comes to passenger and freight stock. Victorian colour schemes is no worry generally. Would it be possible to print one page dealing with a particular unit of any Australian system, including passenger as well as freight, similar to Paul Rogers article, with coloured photographs, in future issues? I found that particular article very interesting and will certainly look forward to them, if it can be done!

It does look good this year, as you stated in your last issue, for the Australian modeller, and I hope it continues to do so in the future, and with the expected arrival of the Lima 'ELX' for the Vics and S.A. modellers, and other models due in, it really is something to look forward to. So far B.G.B., Trax as well as the backyarders (if I may term a phrase), have all done their share to get the Australian prototype into model form. Some models have been rough to work on, but let's face it, a lot of improvement has been done, and is still improving and I think most modellers of the local scene appreciate what is being done.

Once again, congratulations on the magazine. It has improved tremendously, especially the issue with colour pages. One sees a lot of work that is put into it by all concerned.

R. McGuigan
Northcote 3070

As finances and suitable publishable material allows, future colour issues will be published. AMRM welcomes suggestions as to colour article requirements. Ed.

Sir,

I refer to Mr. R. Cunningham's letter of last issue, and in particular his suggestion that we do not rush out to purchase commercially available items "as they will almost certainly be available for a long time to come".

I have just heard that TRAX will soon cease production of the LCH kit for a period. Therefore, one has no alternative but to rush out and buy now.

P. Lewis,
Peakhurst. 2210

The above information has (in part) been confirmed with the principals of TRAX, although they advise that there is no definite plan for the (LCH) kit to completely disappear from hobby shops before finances allow a re-run. (Editor).

ANOTHER USEFUL HINT

The NSWGR HO crests produced by Mansfield Hobbies are suitable not only for decorating locomotives but also for placement on those items of Sydney's single and double deck suburban electric stock which appeared in tuscan red livery. N Gauge enthusiasts can find a use for the "plain" version of the crest, affixing same to external walls of models of State Government buildings such as motor registries, lorry checking stations and the like.

Paul Rogers.

REVIEWS

ON TRACK. THE MAKING OF WESTRAIL, 1950-1976. Published by Westrail. Our copy from Mail Order Models, 14/29 'Marsden' Great Western Highway, Parramatta, NSW 2150. Price $8.00 per copy post paid.

The history of Australia's State railway systems has always been a stop-go affair. The initial developmental period when the basic network of lines was laid down has been followed by alternating periods of financial neglect, re-equipment and renewal involving heavy capital investment then relapse into capital starvation.

All state systems seem to have suffered from this cycle with the periods of neglect sometimes threatening the viability of the systems themselves. After this period of neglect has reached the crisis stage a change of direction, usually for political reasons has seen capital being advanced in large amounts for the rehabilitation of the system.

Several good books have been written about these rehabilitation periods. The Jennings book on W.A. Webb and the SAR is one that readily comes to mind.

ON TRACK is another such book.

It is basically a statement of how Westrail (then WAGR), in an appalling condition in all areas of operation after decades of Depression and wartime neglect, was virtually rebuilt during the period 1950 to 1976 into the modern, efficient system it is now.

The book begins by describing the state of the system in 1950 with its antiquated locos and rollingstock, poor track, low morale etc due to two decades of financial malnutrition.

It sets out the steps taken towards modernisation in the decade of the 1950's culminating with the appointment of a new commissioner, Cyril Wayne in July 1959.

It describes how, in 1961 a milestone for the WGR was reached with the signing of the Standardisation agreement with the Federal government. This agreement was to have a dramatic effect on the WAGR as it led to the complete rebuilding of the east-west mainline and to decisions by the WA government to upgrade almost the entire WAGR system. This included substantial investment in such facilities as new, automated marshalling yards, complete dieselisation, major track renewal and large-scale rollingstock replacement.

All of this is described in detail in the book.

One area of change which is covered most adequately is management. This is probably the most difficult area of any large organisation to change and yet the area most needing attention in our railway systems. The new management techniques instituted by the WAGR in its attempts to improve efficiency make interesting reading.

One fascinating chapter of the book is devoted to the Midland Railway (what a great name for a model railway-shades of Railroad Model Craftsman) which as a privately owned general freight railway was almost unique in Australia.

466 Kilometers long with up to eight diesel locomotives just before takeover, the railway company operated for almost 70 years until 1963 when it became part of the WAGR. It had exchange sidings with the WAGR at both ends and the railway would make an ideal basis for a layout.

The book itself is written as a series of narratives by persons associated with the WAGR. The narratives are linked together with text to illustrate the topic being covered. The result is not only a series of extremely interesting insights into railway operation but also an eminently readable book.

There are excellent maps of Westrail which are helpful to those of us unfamiliar with the system and a set of interesting photographs to round out an excellently produced book.

There is something in this book for just about everyone interested in railways, railway history, railway construction, railway operation the lot.

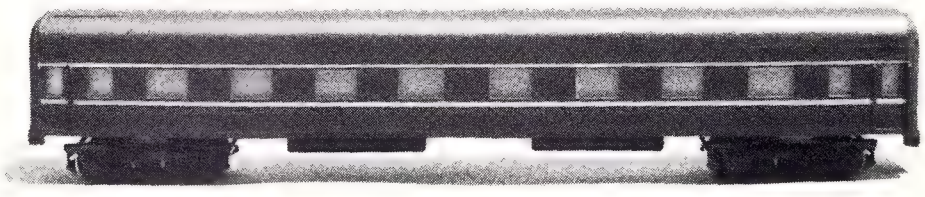
I found this a most enjoyable book, thoroughly recommended.

Ron Cunningham

Friedmont Spirit of Progress Carriages and Van, 8 cars in two sets, at $30.00 per set, from Viaduct Hobbies, Flinders St., Melbourne.

The kits come in sets of 4 cars in a polybag with label Set A consists of one each CS Baggage/Guards Van, AS First Class Sitter, BZ Economy Saloon Car, AZ First Saloon Car. Set B contains the Buffet Car, plus one each AZ, AS and BZ. The individual cars are made up from two sides, sub-ends, ends, one-piece floor and a piece of wood moulding to represent the roof.

As supplied, Spirit of Progress set 'B'.



The castings are of the usual Friedmont epoxy material, with all detail including handrails cast on. They are not sticky and have very few bubbles, I counted about half a dozen blemishes in each set. The thickness of the sides and floor is uniform; however that of the end-door castings varies considerably, and they require a lot of work to make them presentable. The roof moulding is not of the correct contour; the prototype has a continuous compound curve, whereas the pieces supplied have a flat area in the centre.

There are no underbody details except for two long tanks moulded onto the floor casting. The modeller could, however, easily add the required generators, batteryboxes, airconditioning equipment. etc. Most pieces need some straightening, which is easily accomplished in an electric frying pan with about an inch of water just under boiling point. This applies particularly to the sides and floor. After immersing the pieces, one at a time, for about 30 seconds, they can be laid on a piece of Laminex or glass and they will cool and harden to a straight shape.

The next stage is sanding the various parts, to remove the "turn-up" on the edges of the castings, particularly the sides. This stems from capillary action during the casting process. A lot of sanding is required, but it is the only way to finish up with a square model. I found this is best done with a sheet of fairly coarse sandpaper laid on a flat surface, with the car side being passed back and forth over it. Once all the pieces have been prepared in this way, and the sides are matched into pairs, they can be glued together with 5-minute epoxy, taking care that everything is square. Leave the end-door castings until later. The windows can now be painted from the **inside,** either silver or black, according to your preference.

The roof is next; trim this to length, so as to match the sides, and glue in place with regular Araldite. Because the roof moulding is too wide, it needs to be centred over the body and sanded back when the glue has set. I found an orbital sander useful for this. The inevitable crack between the wooden roof and the epoxy sides can be filled with "Fine Surface Polyfilla", taking care not to come near the windows with it. Just smear some on with your fingers, and also cover the woodgrain in the roof with it. When dry, sand with fine wet and dry paper.

Now the end-door castings can be installed, after plenty of sanding to bring them to a reasonable and uniform thickness. The models can now be sprayed with a coat of "Testor's Dullcote", and be set aside to dry overnight. A 3'3" square of thin card is now glued on the roof over the doors at one end, to represent the access hatch for the airconditioning equipment.

I brush-painted the cars with Floquil Enchantment Blue, about three coats were necessary. The yellow bands were applied separately, each between two strips of Scotch Invisible Tape, which peels off easily after the yellow (Floquil Railbox or Reefer yellow) has dried thoroughly. Repeat procedure for each individual band. The most suitable bogies for these cars seem to be the Roundhouse Commonwealth passenger trucks. Kadee No. 5 or dummy couplers are easily installed.

The dimensions of the finished models reflect those of the prototype quite accurately, with the exception of the bogie centres, which are 52 ft. instead of 53 ft. apart. This however facilitates the installation of the couplers.

The train, with a Lima S-Class up front, captures the smoothsided look of the real thing quite well, as long as one is not looking for a superdetailed, perfect model. They are not in the same class as say a Walthers or Northeastern craftsman-type kit, rather they are a reasonable replica of the prototype, and viewed within these limitations they are acceptable. The cars, including couplers, bogies, glues and finishing materials work out at approx. $11 each. The fact that this review has developed into almost a set of assembly instructions highlights the almost total absence of this type of information from all Friedmont Kits, to say nothing of the complete lack of prototype background and lettering diagrams. Not all of us are in a position to obtain plans and accurate photos of the prototypes. These days it is simply not good enough to just pack some castings in a plastic bag and expect the public to be enthusiastic about them, and in my view with a kit of this price one should be able to expect at least a foolscap typed sheet of this information. This would also help the less experienced modeller and thereby widen the appeal of these basically very simple kits.

Peter Eisenhut

HO scale Victorian Railways Y class bogie sideframe — Sample supplied by Broad Gauge Models, Boronia Vic. Price $11.95 a set.

The Y class diesel bogie sideframe is again available but is now produced in bronze instead of white metal. The use of the harder material has allowed some alterations to be made which improve the

appearance over the earlier castings. A re-design of the bolster allows one to see through the central portion of the sideframe and the axle holes do not now require the use of the Athearn olite bearings.

The casting provided had a clean finish free of flash with good detail and is designed for use with the Athearn SW 1500 machanism. The sideframe has additional uses under a Tait suburban motor carriage or for the power bogie of a DERM rail motor for those wishing to scratchbuild such vehicles.

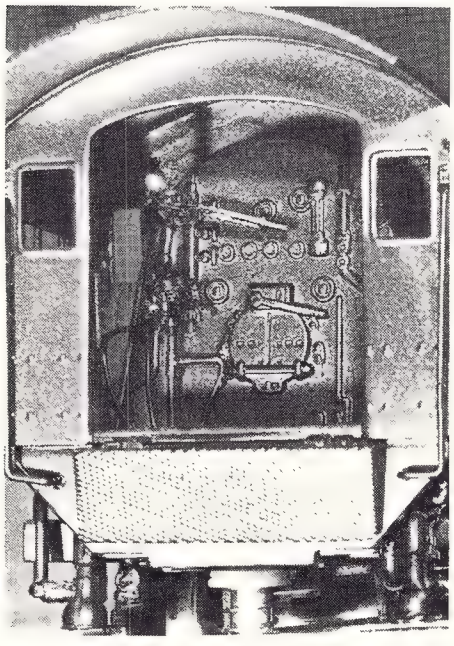
Y class diesels have become the 'maid of all work' on the Victorian Railways and these sideframes will undoubtedly enhance a model of this locomotive whilst providing for the use of a proven and reliable mechanism.

Graham Ahern

Photograph of the Pemco GG1 by courtesy of McBees Hobby Centre.

Brass D59 class locomotive, in HO scale. Manufactured for Bergs Hobbies, 261 Church St., Parramatta. 2150. Price: $299.00.

To alleviate a shortage of locomotive power on the State's system immediately after the Second World War, the NSWGR acquired twenty 2-8-2 tender locomotives from the Baldwin-Lima-Hamilton Corporation of Philadelphia, USA. Because of the need to turn these locomotives on a standard 60' turntable it was found necessary to construct shorter "bob tail" tenders. This prolonged delivery of the class until 1952-53. As built the locomotives were adapted to burn fuel oil, but economy measures resulted in seventeen of the class being converted to burn coal. Conversions took place over the years 1962-1966. The three units not converted were 5908, 5916 and 5918, the latter having been withdrawn in July, 1957 as the result of an accident.



The cab detail on the D59.

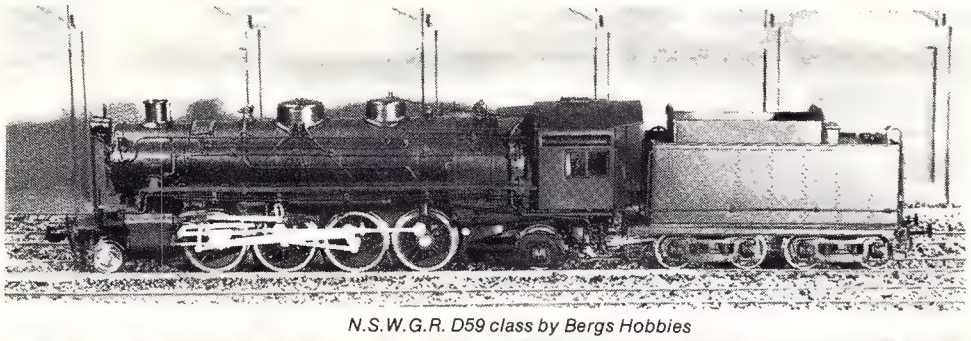
The model under review is the latest from the Bergs stable, having been made by Samhongsa of Korea. It is a representative of the coal burning version. The model is powered by a can type motor located horizontally within the firebox and driving through a flexible shaft into a series of reduction gears contained within an enclosed gearbox on the third driving axle. No binding could be found during operation, nor was there any such binding in the extremely fine and free moving coupling rods and associated motion. All driving wheels are flanged and contain the correct number of spokes (13). The model contains a wealth of pipework all of which stands proud of the body (this is so obviously NOT a plastic model). Dimensions are within accepted tolerances; actually the only one not correct was the length which was some 1'6" too long. However, one must allow modeller's licence to prevail here, especially when one considers the tight coupled wheel arrangement being modelled. The concealed motor allows for full cab detail, even down to the crew's seats. Additionally the locomotive contains the hinged cab footplate so that when coupled the crew has solid steel under their feet from firebox to tender hatch. All wheels checked out with the NMRA standards gauge. The tender bogies are compensated on one side. Loco brake shoes are brass and permanently located in the correct places on the keeper plate. A pivoting coupler is located on the front of the loco whilst the tender is drilled and tapped to take a Kadee No. 5. Watch the clearance, though. The coupler knuckle might be too far inboard of the buffers and cause buffer lock. If so, the coupler will have to be relocated a bit further out, or else a longer shank variety used.

The one major problem on the body is the cover box just forward of the cab roof, above the firebox area. These covers were fitted when the locomotives were delivered but appear to have been removed for ease of maintenance of the components underneath. I was not able to find any photographic evidence of them being fitted after conversion.

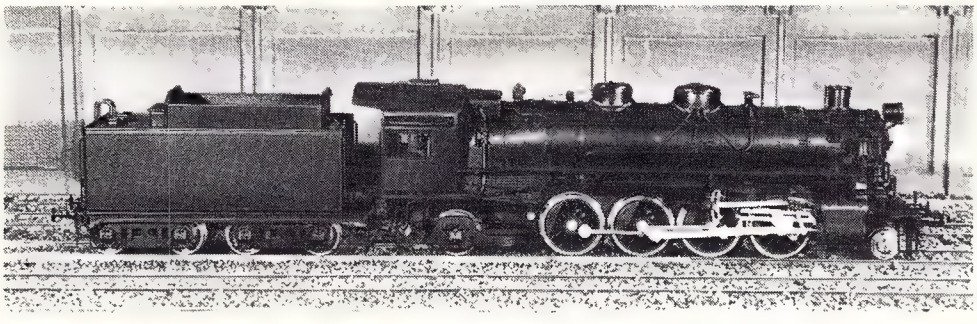
While the locomotive looks good and runs well I was a little disappointed in its pulling power. With a 1:40 grade to test on I could only get it to pull eight bogie vehicles (two of which were heavy LLV's) before slipping occurred. However, all brass locomotives are noted for poor pulling power initially, but invariably improve with use. I have no reason to doubt that the 59 will be any different.

All in all it is, in my opinion, the best thing yet to come from the Bergs team and congratulations must be given for thorough research, culminating in an excellent model.

Allan Brown



N.S.W.G.R. D59 class by Bergs Hobbies



HO scale GG1 by Pemco. Our sample supplied by Valley Toy Store, 73 Albert St., Moe, Vic. 3825. Price: $35.98.

If you want a GG1 and your pocket does not run to the cost of the more expensive versions from other manufacturers, then maybe this Hong Kong made Pemco unit could fit the bill. Features that I believe make it worth considering:—

— cost
— traction tyres on driving wheels
— electrical pickup on one side of power truck and pilot truck with return on the opposite side of the non-powered truck and the pilot truck at the other end. A quite well designed power collection system which enhances smooth slow running over 'insulfrog' type pointwork
— diode controlled directional lighting
— model supplied was Tuscan Red with Pennsylvania markings. Apparently Brunswick Green is also available
— plastic model with good detail on bodyshell and sideframes. No flash to be removed
— working pantographs which are also wired in for power collection
— concise but clear instuctions on use and maintenance
— apparently quite a good 'Lima' type Ringfield motor
— No. 7 underset Kadee couplers can be fitted with very minor modification
— runs smoothly
— tracks well even at speed over multiple pointwork.

Features that in my belief detract from the model:—

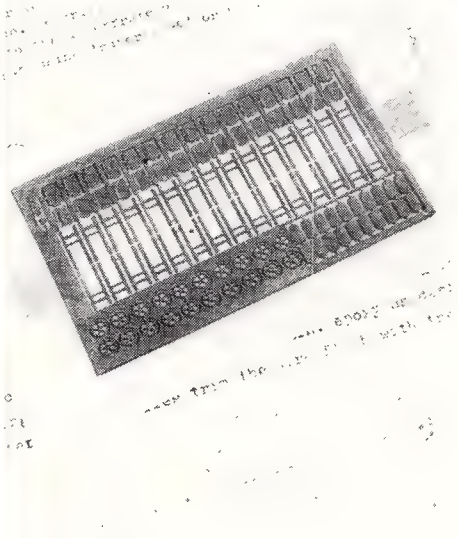
— the power truck, the non-power truck and the pilot trucks all have metal tyred wheels on one side only, for loco/rail electrical contact; the other side of each truck has black plastic wheels. Thus, from side on, the loco has half black wheels and half metal tyred wheels — a certain non-uniformity
— directional lighting is voltage dependant i.e. brightness varies with power input
— paintwork is only fair
— pantographs operate but are very stiff and tend to stick in one position and not retun after being depressed
— there is no inbuilt switching to enable selection of track current or overhead catenary current
— the motor is very high geared so the loco starts quickly on a small applied current and achieves a greatly overscale speed on full power (12v d.c.)
— globes for directional lighting are the medium large screw socket type, which both had to be screwed in tightly to ensure continuous operation. At least the globe is not the actual headlight — this is a piece of Lucite mounted in the bodyshell in front of the globe and does function effectively
— a number of the wiring connections within the loco itself had to be resoldered as the joints were crystalline and in one instance had actually come apart
— the tractive effort is not good but judicious use of the speed control will reduce slipping and maintain motion and speed with a consist of 10-12 Tyco 50' boxcars. Replacement of the three stacks of sheet steel weights with lead may also improve performance. (I have not tried this yet.)

In general terms, for the price you pay, a good to look at, neat, clean smooth running unit. It has deficiences,

as described, which some may call nit picking. However, these minor faults are not insurmountable if one has the desire and is prepared to put in the time and effort.

Size	11.7 x 1.5 x 3.6 (inches)
Weight	420 grammes
Tractive effort	90 grammes
Speed	26 ins./sec. at 12V DC
Current	300 MA

Rod Williams



HO scale Victorian Railways style shunters steps and brakewheels — Sample supplied by Broad Gauge Models, Boronia Vic. Price: $4.50.

This etched brass sheet contains enough parts to fit 15 goods vehicles with shunters steps and 10 goods or passenger vehicles with handbrake wheels. The etching is crisp and well thought out but on the sample, some of the drill/fold marks were absent or indistinct.

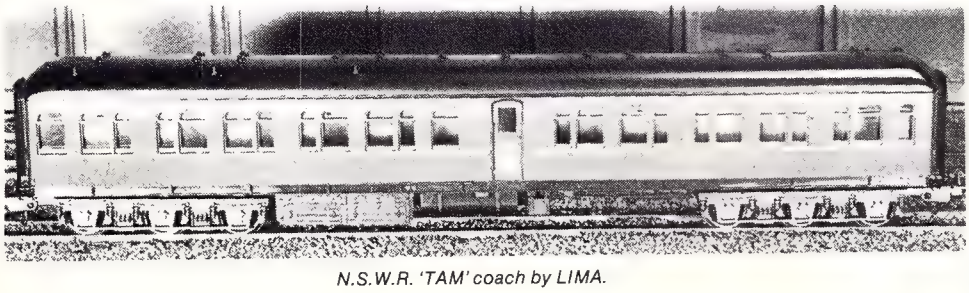
The instructions are clear and concise with ample diagrams. Assembly can be undertaken by soldering or using one of the instant glues. Whilst the pieces are fine, no difficulty should be experienced with assembly if care is taken. They will help add that finishing touch to a VR prototype model.

The shunters steps are a very common feature of the goods vehicles of the VR but the wheel type handbrake is not so common. The handbrake wheel looks rather large at a scale 1'3" diameter. Nevertheless a useful product at reasonable cost which requires a little care and patience for best results.

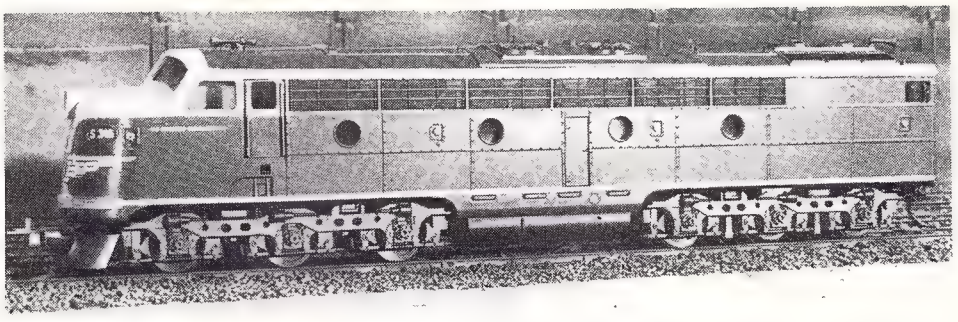
Graham Ahern

Lima HO scale TAM class sleeping carriage — Advance sample from Southern Models, Adelaide. Price: to be advised.

The TAM sleeping cars were introduced in 1913 and became the standard sleeping carriage on the New South Wales system. Altogether 50 TAM's were built over a number of years and they are numerically the largest class of sleeping carriage on any railway system in Australia. They have been little altered throughout their long working life and whilst their facilities are now somewhat dated by modern standards, they still perform a useful role on night mail services to places such as Grafton and Junee. TAM's have travelled to every destination of consequence on the N.S.W. system. They regularly formed part of the consist of the Melbourne and Brisbane Expresses prior to the introduction of air-conditioning on such services and for a time were seen on relief trains to Melbourne after the opening of the standard gauge. The number in service in recent years has dwindled as more up-to-date vehicles became available and a few have been transferred to the Way & Works register.



N.S.W.R. 'TAM' coach by LIMA.



V.R. 'S' class by LIMA

TAM's measure 72'6" long over body, 9'7¼" wide and 13'5" high, with timber bodies on steel underframes mounted on six wheel bogies. The cars entered service in varnished wood finish but were painted tuscan red in more recent years. The crown lights (small fixed panes above windows) were removed as the cars were overhauled in the 1950's and several cars were fitted with electric heating in the 1960's and recoded EAM and XAM.

The model represents the TAM in the post World War II period with crown lights and tuscan colour sheme. The detail on the model can only be described as superb. The wood panelling and crown light detail are as good as any I have seen on a Lima model and faithfully capture these particular features. The underframe represents the two bar (truss rod) verson and whilst the truss rods themselves have been omitted due to manufacturing problems, the other underfloor fittings are more prominent and the absence of the truss rods is much less noticeable. The battery boxes and bogies, in particular, have excellent detail and the latter will, I am sure, be in much demand as a spare part. As the underframe is common to the TAM and MBE, steps could not be fitted in standard locations and sensibly have been left off. The roof has half-height vents fitted generally of the torpedo style, and whilst the location of some vents could be questioned, they can be replaced if desired.

The lining and lettering are well done in the style appropriate to the tuscan paint scheme. The roof, diaphragms, underframe and bogies are moulded in black plastic and the wheels have been chemically blackened.

The model correctly meets scale measurements for length and width and the height would be reduced to correct dimensions if 10.5mm wheels are fitted.

All in all an excellent product and probably the best model of a passenger carriage that Lima have ever produced. It undoubtedly was worth the wait and deserves to sell very well.

Graham Ahern

V.R. "S" class Diesel Electric locomotive, in HO scale by Lima. Our sample supplied by St George Hobbies, 504 Rocky Point Rd., Sans Souci. 2219. Price: $34.99.

In August, 1957 the Victorian Railways took delivery of the first of an order of ten cab units from Clyde Engineering of Sydney. Intended for use on the broad gauge expresses (Albury, Overland and Spirit of Progress) these units carried the road numbers S300-S309. The units proved so successful that the order was increased by eight for use primarily on the newly completed standard gauge. These units carried the road numbers S310-S317. In February, 1969 locos S314 and S316 were involved in the Violet Town disaster of the Southern Aurora and subsequently scrapped. In later years the standard gauge units have largely been converted and used on the broad gauge.

In October, 1976 Lima produced a model of this popular locomotive using the basic body shell of the 44 class model, but changing the sides to suit. It was totally wrong. The company has now seen fit to retool for an accurate model, and accurate it is. Using their new, more responsive motor, they have faithfully captured the "flexicoil" bogies so unique to Australian locomotives, and have included the new, blackened wheels therein (to NEM standards).

The one piece body shell contains a wealth of detail including side strapping, side grilles, roof grilles and fans, plus most rivet detail. The missing exhaust stack (of pilot model days some months back) is now included. One minor fault, however, is the duplication on the right hand side of the staff exchanger recess. The body is moulded in blue and resprayed. It is then masked for yellow and the wings inserted. Sandbox caps and cab handrails are silver plated. The model is numbered S315 (standard gauge) and carries the name Sir Charles Garvan Duffy under each of the cab side windows. All colours appear correct. Lima's couplers are bogie mounted and the loco's front skirt clips around the shaft of the front coupler. Forward direction lighting is included. The model conforms to all basic measurements in accordance with this magazine's plan of the 'S' class in the March/April, 1979 issue.

The unit operates as well as it looks. Gone are the occasional wobble of earlier locomotives, no doubt as a result of the vastly improved motor. The loco runs smoothly and a lot quieter through all speeds and it is now possible to obtain good slow running (helped a lot by the strategically placed weight in the body).

Generally speaking it is a top class model and well up to the standard set years ago by the 44 class, the model by which we tend to judge all new models. It will only be a matter of time before someone kitbashes the S class to obtain the B class, thus enabling yet further variations on a model consisting of good quality components. We can only wait now to see if the NSW 42 class is equal in quality.

Allan Brown

Satellite ELV ribbon cable tape. Sample supplied by Satellite Safety Switches Pty. Ltd. PO Box 429 Gosford.

Wires and cables are essential for the railway modeller who does not possess a command control system, and even then some cables are necessary. The unusual aspect of this product is that while it is a low voltage electrical cable (two or three strand) it is enclosed within a plastic envelope which has a self adhesive backing. To make the best of this product one would have to use the self adhesive backing to run the cables around the layout. It could be run on the underside of the baseboard as long as extra care was taken when drilling holes.

The sample reviewed consisted of two 27 SWG copper conductors spaced 1.75mm apart in a plastic film 6mm wide. The cable is rated at 0.5 amps and is packaged inside a plastic spool. Plugs and sockets are available for terminals.

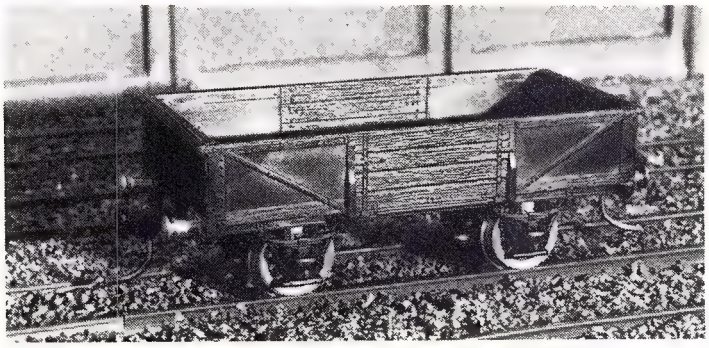
It should be stressed that this cable is for low voltage only, i.e. 12 volts D.C. or A.C. DO NOT USE ON 240 volts!

The product has some unique advantages over the loose wiring methods used at present. (Prices are listed on page 52 of Jan/Feb 1981 AMRM.)

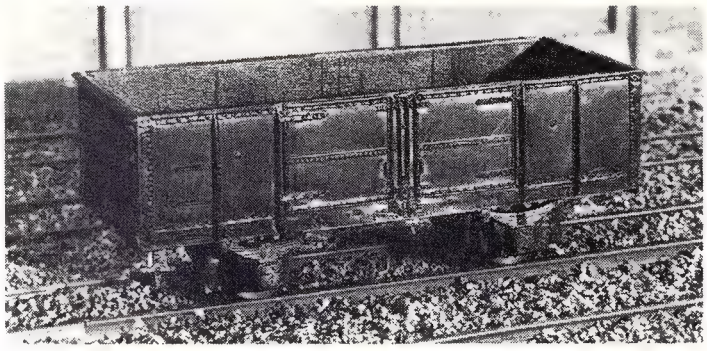
Bob Gallagher

NSWGR 'S' wagon kit in HO scale by TRAX Model Products, P.O. Box 312, Ryde 2112. Price: $4.95.

The 'S' wagon, as depicted by this kit, was the staple workhorse used by the New South Wales state railway system. During the 1940's a replacement programme was instituted by the Railway Department to replace existing four wheel open wagons (carrying 'S', 'SS' and 'D' codes) and an order for 10,000 underframes and components was placed with Commonwealth Engineering. Upon delivery the Railway workshops built the bodies and the wagons were entered into service between 1945 and 1958. Not all the 10,000 underframes were made into 'S' wagons. The wagon has a wheelbase of 10ft, is 18ft long and 9ft7in wide and has 3ft high sides which has a 7ft downward folding door in each side. The wagons carry road numbers from virtually every page of the goods wagon



TRAX 'S' wagon fited with the St George Hobbies buffers.



N.S.W.R. 'K' wagon by Bergs Hobbies.

number book. In 1970 there were 6826 in service, and despite a heavy disposal programme there were still 2,540 'S' wagons in service in May 1980.

The kit comprises polystyrene mouldings, supplied on two sprues, and a sheet of assembly instructions, all enclosed in a poly bag with a card top. Each sprue contains a side, an end and a floor; one floor moulding is an extra. The mouldings are separated from the sprue by cutting the holding lugs, which in turn must be trimmed back to the body of the part with a file or sharp edge. Care must be taken with removal of the holding lugs on the bevelled edges of the end sections, for too much removal or too little will result in a poor join. The parts are free of flash or moulding defects except from the die separation ridge on the coping of the end section, which can be removed with careful filing.

Detail on the components is up to what is expected in a professional styrene injected moulded product — timber grain, rivets, strapping angle and coupler lifting bar. The assembled model scales out at 18'3" long, 9'9" wide, 10' wheelbase and the sides are 3' high. The depth of the metal panels on the sides is too shallow, it being approx. ¾" when it should be 1½". This criticism may seem overzealous but the lack of depth is more pronounced when the wagon is run alongside another 'S' wagon, and bear in mind that a thick coat of paint will completely hide what depth there is in the side panel.

A highlight of the model is the interior detail which includes rivets and timber grain on the door. The kit does not include any brake or undergear detail.

To assemble the kit a slight modification is required, and by carefully and patiently following the instructions this can be achieved. This kit has the same problem as the LCH kit in that it is designed to accept the standard NMRA/AMRA pinpont wheels without bearings. Those modellers wishing to fit bearings will need Mansfields' 10.5mm wheels and trim down the MGW/MAYGIB/Proto Four bearings.

The kit, after the modification and the choice of wheels, is relatively simple to assemble. An experienced modeller will have no trouble assembling a kit in half an hour. The kit assembles without any defects.

The sheet of paper that accompanies the kit is designed for the experienced modeller only, but the untried modeller would probably blunder through and assemble kit to a satisfactory standard, for the kit is well designed for simple assembly.

The kit can be painted a variety of colours including matt black, grey, PTC blue and SRA red as well as varying shades of rust and weathering.

The 'S' wagon is the standard wagon for the 1945 to 1980 period on the NSWGR and a NSWR layout would not be complete without the odd 'S' wagon or two. For this reason alone the 'S' wagon is much needed in kit or ready-to-run form and this kit fits the bill nicely. Unfortunately, due to inadequate instructions, the kit is really designed only for the hard-core modeller who has the experience and knowledge to assemble and detail the kit to the standard that is possible with the raw kit. This can be corrected with a detailed and informative instruction sheet, which would cost very little to produce.

Bob Gallagher

Rail-scene modular backdrop system by Detail Associates. Samples supplied by McBees Hobby Centre, PO Box 144, Coburg 3058. Price: $8.95 ea.

It is very difficult to make a scenicked layout appear realistic without a good scenic backdrop. In days of old you had to be either a very good artist or know a good artist so that a realistic backdrop could be painted. This is no longer the case for a few manufacturers produce backdrops of different environments, so that modellers can choose the scene that will complement their layout best. The Detail Associates modular backdrop system has become available in the past few years.

The backscene sheets are supplied rolled up inside a polly bag for protection. The scenes are printed on high quality gloss paper, which is 220mm x 560mm long. Each sheet contains 560mm (length) of backdrop, and in some instances 1120mm length of scene. This is made possible by the different approach (to background scenery) taken by Detail Associates.

The scenes are in effect a module that has to be cut out and added to a (sky) blue backdrop. The twelve scenes are so designed that they can be added to each other without repetition or gaps in the scenery. It is also possible to use most of the scenes at least twice alongside each other without visual repetition, for many of the scenes have additional sections that can be cut out and added to sections of the scene, which in fact simulates different placement and profile of some of the major structures.

Scenes include city, industrial, lumber yard, oil tank farm, oil fields, farming, woods, forest and mountains. The architectural style and geology is obviously American, but can be Australianised. Colouring is realistic and the three dimensional depth is captured by the angled buildings. The paper cuts easily and cleanly, and the glue recommended for attaching the scenes to the backdrop is art cement. (A brand available in Australia is the Clag art cement, available at major stationers and art shops.)

There are many different ways for the scenes to be joined together and detailed, and experience will teach the modeller many of the secrets (at the expense of a few scenes) but Detail Associates have foreseen this problem and have produced a booklet that describes in detail the sheets and offers many suggestions on how to get the best out of these relatively expensive scenes. (Cost of Manual: $5.00.)

A new, refreshing approach that appears to adequately satisfy a need.

Bob Gallagher

LCH/CCH decals by AMRI. Sample supplied by St. George Hobbies, 504 Rocky Point Road, Sans Souci. 2219. Price: $1.00.

These decals are designed for the coal hoppers coded LCH/CCH. The NSWGR lettering and the wagon number is placed on the third or fourth plank from the top with the lettering and numerals printed each side of the centre steel support. The wagon code (generally) is painted on the sole-bar, along with brake wheel directional guides.

All lettering and numerals are (prototypically) white, as are the decals. Each of the two sheets contain sufficient decals to letter a LCH/CCH 1344, although two rows of additional numerals allow for alteration of the number. (1344 according to official records is 'S' wagon number). The lettering/numerals are 5 scale inches high, which is very close to scale.

Bob Gallagher

NSWGR 'K' wagon kit in HO scale by Bergs Hobbies, 261 George St., Parramatta. 2150, who supplied the sample. Price: $7.95.

The 'K' wagon entered service on the NSWGR in the mid 1920's as both the hopper 'U' type and the wooden floor 'K' type. The wagon is an all steel construction four wheel open wagon. It is 22' long, 9' wide, has a wheelbase of 11'6" and has 4'1½" sides with 10'3" double opening (pressed) doors in the centre of each side. The wagons were built by Waddingtons and Commonwealth Engineering, the Waddington wagons have dreadnought ends while Commonwealth Engineering supplied ribbed ends. Construction of this series of wagons continued for many years, the last order from Commonwealth Engineering being delivered in 1951. Many alterations occurred to the vehicles in the class, the subject of which would be too big to cover here.

Since 1938 3,000 wagons were delivered, and while the complete class of 'U' type open wagons totalled 2,607 in 1970 (2,277 of them being 'K' wagons), by mid 1980 there were only 71 listed for revenue service. Now, in 1981 it is a very rare occurrence to sight a 'K' wagon.

The class was painted NSWGR goods wagon grey, except for the TPK variety which was painted silver. The 'K' wagons were used for general goods work, as well as for carrying coal (especially on the Camden branch) and in the late 1970's it was not unusual to see strings of 'K' wagons (some with the doors removed) carrying a standard ISO container.

The wagons built since 1939 carried the following road numbers; 22978-23077, 23350-24099, 24600-24950, 25350-25599 and 26775-27774.

The model represents the dreadnought end version, with flat door panels. As supplied the kit is packaged in a polly bag, and the kit includes all body panels, a floor, solebars with axle guards attached, hand brake wheels, brake shoes, air cylinder, a set of 10.5mm wheels (26mm pin-points), and a set of brass bearings and a set of assembly instructions.

All parts except for wheels and bearings have been formed by the injection moulded process. Detail is (in places) rough, and the rivets are too big. The dreadnought end is not a good representation. The side doors are flat, instead of the (diamond) pressed style, and a row of rivets is embossed across the centre of each door. This is not standard for the 'K' wagon. The air cylinder is undersized in diameter. Axle box detail is good and the 'K' style of springs are well represented as is the see-through 'W' guard attachment onto the solebar. Axle guards are centrally positioned and the pre-formed bearing holes are centralised, which allows for good fault-free running. The brake shoes are a basic profile only, and the handbrake wheel is supplied attached to the mounting bracket.

Prior to assembly all parts need detaching from the plastic sprue (except the sides and ends) and cleaning up with a sharp knife and a file. It is also necessary to clean off the die separation ridge on the coping of the end section. Assembly is straightforward, although the crudely presented assembly instructions are a little hard to follow in places. It is wise to ensure that the solebars fit tightly against the floor, and it may be necessary to file off part of the brake shoe mount to accomplish the neat fit.

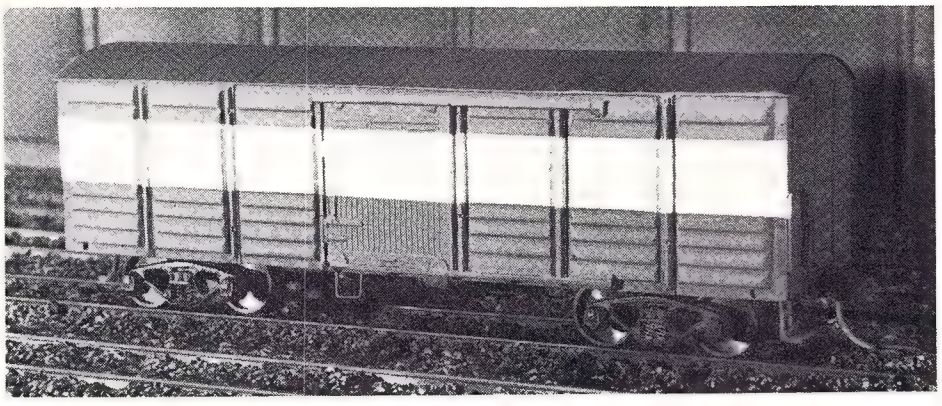
The parts went together neatly, and were joined with MEK (liquid styrene solvent), but the solebars needed trimming neat to the floor length, which was approx 1mm short. The sides and ends joined up without any visual gaps. To fit Kadee couplers (No. 5) it is necessary to file away part of the end stock and fit a fillet of styrene on the underside of the floor. Superdetailing is not too difficult, for most of the detail is already on the kit, including the grab rails on the side. These should be removed and replaced in the correct position for the grab rails should be above the brake handle.

A simple conversion of this kit is to build it without the body, adding only head stock for a KF wagon. (See AMRM September/October 1977.) Total assembly took one hour with coupler fitting another half hour. The riveted doors spoil the model, for they (the rivets) were not a standard characteristic of it. This is a detailed kit, with most items required included in the price, but from what was expected it is a disappointment.

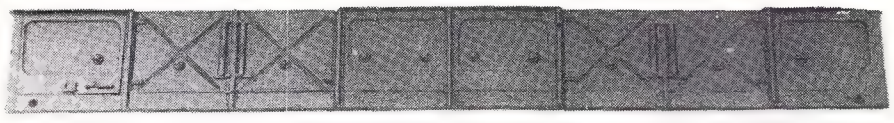
Bob Gallagher

SAR 'D' louvre van kit in HO scale by Broad Gauge Bodies, who also supplied the sample. Price: $5.95.

The SAR 'D' van (now ANR 'ALFA') was introduced to the South Australian Railways in 1926 as part of the Webb rehabilitation programme. There were 100 in the class, the road numbers being 4500 — 4599. Initially they were fitted with a ten section smooth steel roof and archbar bogies and were painted dark grey with white lettering, while the underframe was black. Over the ensuing years a number of variations occurred resulting in different classifications and



SAR 'D' van kit by BGB



S.A.R. 'OB' tiedown variation by BGB.

colour schemes. The varying codes, paint schemes and alterations are covered within the assembly instructions.

The kit comprises a number of polyester castings for the detailed sides and end sections as well as the floor, timber centre sill, curved alumium for the roof, handrail wire and material for roof vents, shunters step and decal sheet for the wagon code board. Detail on the casting is sharp and clear of any defects or air bubbles. The parts are square and of uniform thickness. Accompanying the kit is a well detailed and illustrated set of instruction leaflets, which supply sufficient detail to allow any modeller, especially the uniformed, to finely detail the kit-built model. The three photographs, although in black and white and on flat paper, show a wealth of information.

The kit was built up into a 'DRP' unit and following the instructions the kit was easy to assemble, super glue being used to hold the parts together. The parts had very little casting flash, although the edges of each part was cleaned up with a file. The castings were clean and flat and free of air bubles except for the floor, which had a few air bubble holes. The parts went together well, and the design of the kit hid any telltale corner joints. This kit was not weighted as per the manufacturer's instruction sheet, and it has held its body shape OK.

Care must be taken when trimming the roofing material, and it is necessary to add some curvature to the aluminium strip, via a round chair leg. Kadee 5 couplers were fitted, without trouble and Athearn bettendorf bogies added with BA screws into the floor. Total assembly and detailing was accomplished in one night.

The van was painted in the green and cream, using the paint guide (in the instructions) to mix the colours. The green looks good but the cream apears a little too yellow. (Maybe a mixture of 2 parts yellow and 15 parts white would give a better cream mix).

The kit assembles into a fine model, not in the glass showcase class, but a van that has character and would look good on an operating layout.

Graham Ball

SAR 'OB' (tiedown variation) kit in HO scale by Broad Gauge Bodies who also supplied the sample. Price: $5.95.

The OB kit was reviewed in the January/February 1981 issue of AMRM, but this kit is a variation of the 'OB' open pressed steel wagon. The prototype of this kit is based on a group of 'OB' wagons including 159, 114, 162, 58, 62, 34, 41, 152, 121, 151, 73 and 59. The numbers quoted are taken from a group of wagons sighted at the Port Adelaide grain sidings and, from observation, the variation is quite common.

The basic difference from the 'OB' kit reviewed last issue is that the tarpaulin tie down rail along the solebar of the wagon is missing, while there are additional bollards (two) in each of the two centre sections. In all other features the wagon is similar to other 'OB' wagons, with grey body and red doors. The kit is not suitable for wagons coded O, OMB, OX or OS.

Apart from the detail variation the kit is identical to the standard 'OB' kit, and readers should read Ross Hurley's review of the 'OB' for details. This kit, of polyester castings, was free of flash, defects and out of shape parts. Detail was sharp and the detail variation is well illustrated with a page of photographs, which is additional to the standard instruction sheet. another fine kit from the BGB stable.

Bob Gallagher

Decals for South Maitland Railways locomotives in HO scale by M n'J Decals. Sample supplied by Import Hobbies, 4 Windemere Court, Albany Creek. 4035. Price: $1.00 sheet.

The South Maitland Railways locomotive fleet, particularly the 'Ten' class 2-8-2 tank locomotives (covered in detail in the May/June 1980 issue of AMRM), at times carried the S.M.R. Pty. Ltd. lettering on the sides of the tanks. The lettering was usually 'yellow or buff' but has also been reported in a 'bronze' colour and nowadays is reflective yellow/green.

The sample (which was an advance pre-production sample) shows two sets of 4mm high letters, the correct size and character face, although it will be necessary to separate each letter and each Pty. or Ltd. code to apply them to the locomotive, for each individual letter has to be applied between a set of rivets on the side tanks. This should not prove to be a difficult task. The samples reviewed were a yellow colour. These decals can only be acquired from Import Hobbies.

Bob Gallagher

UNITS IN FOCUS, by Bruce Mead, Graham Cotteral and Roger Renton. Published by Roundhouse Press. Copy supplied by the distributor, A.R.H.S. NSW Division. P.O. Box E129, St. James 2000. Price: $12.95.

The advance publicity for this book was high "This is a magnificent hard cover photographic book — the work of three of the best photographers of modern rail working in New South Wales."

For a concise description of the book, a repeat of the dust jacket details is adequate:—

'Units in Focus is a photographic collection recording most of the changes which have occurred in the late 1970's. The 140 photographs cover a wide range of unit workings with no less than 85 different combinations. Where appropriate, photographs with a common theme have been grouped together with a suitable introduction. These groups are: quad working, through working, Illawarra coal, the Indian Pacific, diesel railcar problems, 43 + 42 sequence and units on hire.

Many of these photographs were extremely difficult to obtain because of the rarity of the working and indeed others are now impossible to get again. This is what makes railway photography such an interesting and rewarding pastime.'

The photographs are printed on glossy art paper, which is necessary to get the best out of any photograph, and in most instances the photographs are superbly reproduced. Some, however, do not meet the average (high) standard within the book, but in almost every instance the (low standard) photograph illustrates some rare working, and (realistically) needs to be included within a book that aims to illustrate of period (ie the 1970's) of railway operation. All diesel units as used by the NSWGR/NSWPTC/NSWSRA in the 1970's are included (except the 40 and 41 classes which were on the verge of redundancy), as well as the ANR classes 'AL', 'CL', 'GM' and the SAR '830' class. The CPH rail motor even makes an appearance.

For the modeller (of NSW diesels) this could be a handy reference book, for in many instances the photographers have not restricted the photograph solely to the engines and reference to train consists can be acquired along with many of the reasons for the unusual workings for the captions to the photographs are very descriptive. Specific loco detail can be scanned from individual photographs to assist model builders.

The most appealing aspect of the book (to the modeller seeking diesel colour shadings) is the dust jacket on the outside of the book. On the front cover is 42104 in 1979 colouring (and yellow nose), while in the rear 42101 illustrates the earlier 421 class livery. A shot of 4205 and an 830 illustrate the colour hue shadings of both classes.

Back to the advance publicity: "... a companion volume to 'NSWGR in Steam'..."

This book lives up to its advance publicity!

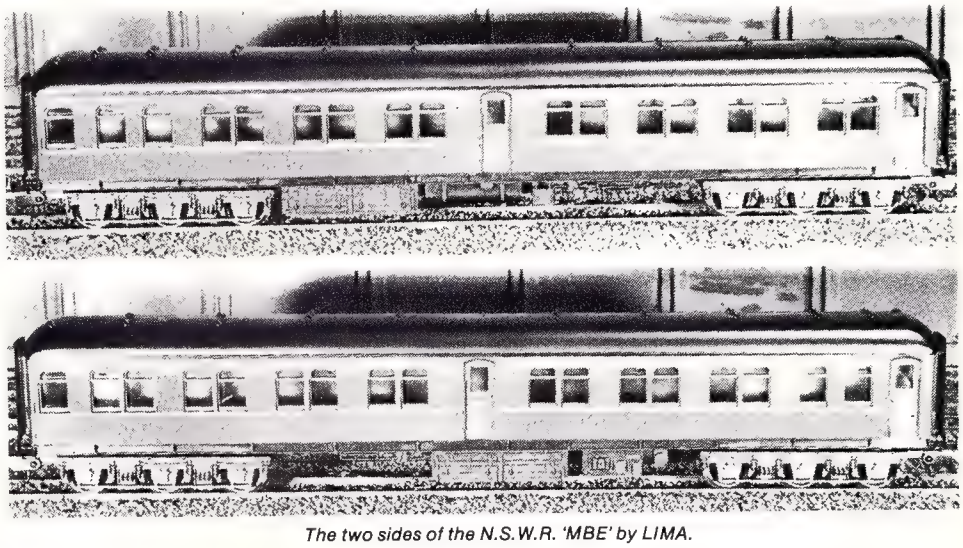
Bob Gallagher.

Lima HO scale MBE class carriage — Advance sample from Southern Models, Adelaide. Price: to be advised.

The 10 MBE first class sitting cars were converted from MBX carriages in 1938/9 by the provision of additional washing and toilet facilities. They conform to the basic 72'6" body profile with enclosed compartments and a basically symmetrical double window arrangement with access through centre doors and an additional door on opposite sides at the end of the car. Two MBE's were later converted to FE and whilst fitted with second class seating, they retained their first class window spacing. FE 712 remained with crown lights until late in 1980.

The MBX cars were part of 90 vehicles built for the NSWR between 1917 and 1931 by various Sydney manufacturing firms and the Eveleigh Workshops. These vehicles were the basis of the twelve wheel rollingstock which remain to this day an important part of the system's passenger operations. All MBX's were converted to other codings and at least one remains with crown lights in special service as AAH 7.

Continued on page 49



The two sides of the N.S.W.R. 'MBE' by LIMA.

AMRM NEWS

by Bob Gallagher

Hopefully this issue of AMRM will be free of the problems which have beset us over the last two issues. We apologise for the typeface variation that occurred last issue. Unfortunately there was very little we could do to overcome the problem and still get onto the streets on time.

Once again AMRM is in need or articles, especially those describing layouts. Remember AMRM readers welcome articles on layouts of all prototype.

Just a Little Research

Most of the models that have been specifically prepared for the Australian market, and have arrived in a grossly inaccurate state, have suffered purely because of a lack of research. There are numerous models still on sale today to illustrate the point.

Research can be a painstakingly hard task, but also a rewarding one. In most instances the researcher needs to have a few special talents, the ability to maintain concentration for long periods and a few special contacts in the right places. There are quite a few such persons in this hobby of ours, and most are only too willing to assist a manufacturer to prepare the details and information for their projects. All the manufacturers have to do is ask. There is no reason why a model can be produced inaccurately just because the principals did not bother acquiring the correct details.

A Long Wait

At last the TAM's are here. They were a long time coming (or so it seemed) but they are here and they are beautiful. Some individuals have been very critical of the long delay, which when all the facts are known is very unfair to Lima and its representatives.

The TAM and MBE project can be credited to John Pennie who at the time worked for Revell, the then Australian agents for the Lima range. John had selected the prototype and sent some photographs to Italy when the news broke in the trade that the TAM's were coming. Some overzealous hobby shops even advertised the forthcoming models long before the plans and final diagrams had been dispatched. How the leak occurred is not known, but some individuals continued to imply that the release of the models was still imminent despite being informed otherwise.

Well, at last the problems have been overcome, and the hobby can thank John Pennie for his application in the first instance and Southern Models for following the project through. Graham Ahearn also deserves a little credit for being on site in Italy at the correct moment, when a few other problems were sorted out. With this sort of co-operation Lima must be able to continue to produce fine products for the Australian market.

The 'S' Class

In 1976 when Lima released their first model of the V.R. 'S' class diesel, many modellers in the hobby were dismayed at what was a grossly inaccurate model. This magazine echoed the thoughts and words of the modelling public. We also took another step, by approaching Lima direct, indicating the displeasure of the Australian modeller, and offering to make available information so that future models would not incur the same problems.

Lima replied and accepted the offer of help, and further indicated their attitude to the Australian modelling scene by making moves to replace the 'S' class with a more accurate model. The final product is to hand and although AMRM cannot claim any credit for helping with the 'S' class we can indicate that it is a fine model. Since the 'S' class blunder, Lima have produced some very fine models, the 8300 brakevan, the ELX open wagon and the TAM coach being evidence to same. We in Australia can think ourselves lucky that Lima were encouraged to produce Australian outline models in the first instance by the Pizzy organisation, when the 44 class and Indian Pacific cars were produced. We all hope that the fine models from the Lima stable continue to roll into the hobbyshops.

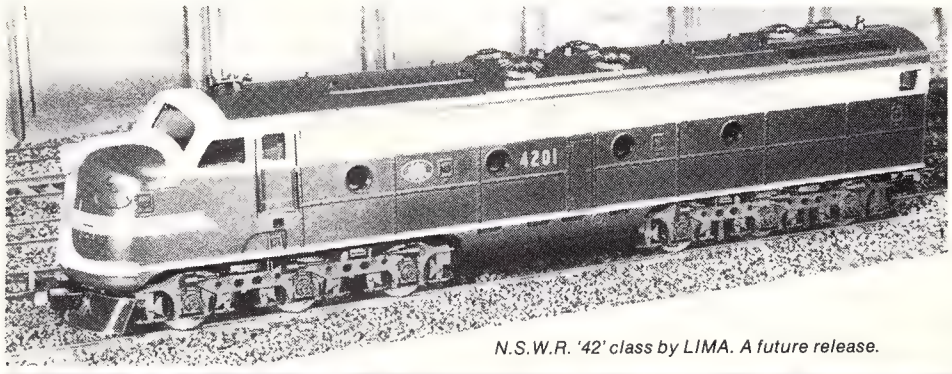
Viva le Difference

It is now quite apparent that there will be duplicate models of the more popular classes of rolling stock produced by different manufacturers. In reality it cannot cause much harm and it should bring some pricing competition into the market place. There is a need however for manufacturers to take care when producing their version of the model, that it be accurate and compatible with models of the same class existing at the time of production.

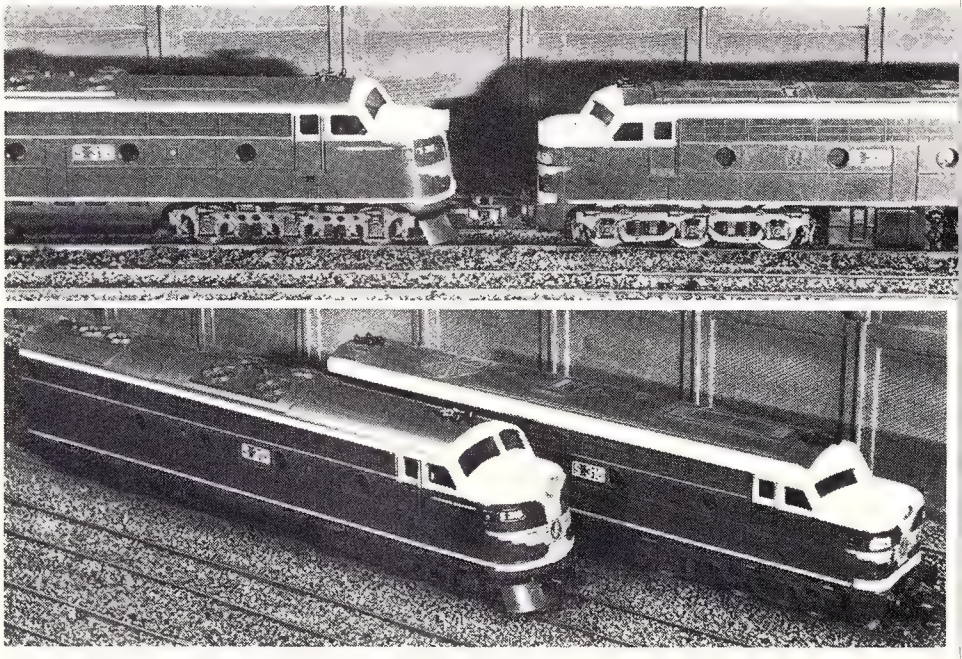
An instance of non-compatibility has occurred with the recent release of the TRAX 'S' wagon. Over the years the 'S' wagon has been produced by many manufacturers including MRC, Friedmont, ProTYPE, CMJ, Workshop 5 Models and Bergs Hobbies, and all of them overemphasized the depth of the plain panels on the sides. The depth should be 1½ inches and most manufacturers have made it at least two inches and a little more. The increase in depth emphasises the fact that the side is not plain, but has timber and metal around the edge and a diagonal across it. Alongside each other the different brands are compatible and appear to be the same.

Unfortunately by design or error the TRAX 'S' wagon does not quite have the full 1½ inch depth, and while being closer to scale (in this dimension) than any other model of the 'S' wagon, when placed alongside the other brands it looks wrong, appearing to have plain flat sides. There is really nothing wrong with the TRAX 'S' wagon, as many modellers will prove by purchasing then in quantity, but those of us who already have 'S' wagons on our rolling stock roster must choose whether to use the TRAX unit, and replace all the others, or to only use the TRAX unit sparingly, if at all.

The difference is less than the thickness of paper these words are printed on but to the observant eye, the difference is vast.



N.S.W.R. '42' class by LIMA. A future release.



The above two photographs illustrate the difference between the first and second series V.R. 'S' class by LIMA. The top photo has the latter [and more correct unit] on the left, while the first series is on the right. In the lower photo the second series 'S' is in the foreground. For more details on the LIMA 'S' class, check the review section this issue.

Commercial News

The months of December and January saw the arrival of many new products onto the Australian scene. The Lima 'S' and 'GM' diesel electric locomotives arrived, as did the TRAX 'S' wagon and 'TRC' van kits. The D59 class from Korea via Berg's Hobbies arrived mid January as did the 'K' wagon kit from Wales. Stephen Johnson Models released an HO scale 'LHG' brake van kit and CHI released their Pioneer Cottage kit. BGB (Broad Gauge Bodies) were the most productive releasing the 'OBf', 'OB' (tie rail variation) and 'D' van kits (all SAR) as well as the V.R. 'V' van, and 'VP' van kits.

Expected in the months of March to May 1981 is the Mansfield '442' locomotive, LIMA's TAM and MBE passenger cars, 'ELX' open wagons, but the NSW '42' is not due to at least mid 1981.

BGB (Broad Gauge Bodies), apart from releasing quite a few new kits in the past few weeks, has plans for a few more which include the V.R. four door 'V' van and the S.A.R. 'SE' explosive van. In the planning stages is the S.A.R./A.N.R. 'SGMX' open wagon and the 'VFX' van as well as a few surprises.

BGB are working on a range of decals to complement their kits, and included in the range will be some of the Billboard advertising signs that once adorned them. 'What about Celery Sue?' (Ed).

TRAX advise that the CCH and RSH kits should be on the market in March, while the 'RU' wheat hopper and the (early version) 'K' wagon should follow soon after.

The brass ready-to-run market is being well supplied at present and on current indications, many more (sought after) model locomotives are to follow. As previously reported the D59 (coal burner) from Berg's has arrived (and was sold out), while the 442 diesel, which was sailing to Australia while these notes were being written, has only a small number of the order unallocated. Berg's expect to release an oil burning version of the D59 in April/May (having delayed the C35 to January 1982) and Mansfield's plan to release a model of the streamlined C38 in November/December 1981. During this period the (third) run of the AD60 is also expected to arrive.

Steady!

There has been a growing confidence among many modellers that at last we (the Australian — NSW — modeller) is being well cared for and the future can only be rosy. In many instances this confidence has been bought about by the production of the injection moulded kits, which many expect to see on the hobby shop shelves for years to come, and consequently are not showing any (purchasing) enthusiasm towards the products.

While there is no doubt that the injection moulded process is very adaptable to re-runs there is no real reason to believe that a kit will be re-run immediately the first run sells out. If the kit is a 'bummer' in that it

N GAUGE AUSTRALIAN KIT

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For your excellent 'ELX' kit, your decals were of extreme thinness, a distinct advantage. *A. Wood, Concord.*

The first injection kit of an Australian model that I have been satisfied with. A truly excellent model. *S. Hyde, Watson.*

A little filing can produce a superb flash free detailed wagon side. Assembly is straight forward and took about twenty minutes, a first for 'N' scale and good beginning. *B. Gallagher, A.M.R.M.*

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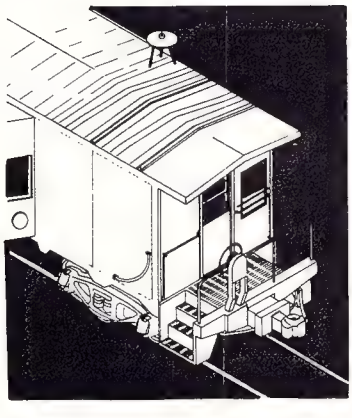

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DETAIL ASSOCIATES

AMRM NEWS *Continued*

does not sell very quickly (at all), there is every chance that the manufacturer will not take the gamble and re-run the kit, just in a hope that the buying public will change their attitude. There is also the chance that when a popular kit sells out that the manufacturer is fully committed (financially) and unable to produce more until a later date.

For the Australian scene to grow there is a need for products to be available on the hobby shop shelf, at all times, but the possibility of product scarceness will always be with us. All the same there is a great need for this hobby to get away from the 'rush-in-and-buy' syndrome that has been with us for too many years. This will come about by careful planned direction by the manufacturers and by a growth of active modellers. The two go hand in hand, and they are not restricted to N.S.W.R. prototype alone.

'K' Wagons

With the release of one 'K' wagon kit and another one imminent, modellers should be reminded that the basic 'K' wagon outline and the chassis can be utilised for many other classes of wagons, including the 'U', 'CU', 'KF' (2 types), 'CKF'. The dreadnought ends could be cleaned off and replaced with the pressed style of end and exterior struts, thus creating further variations.

REVIEWS

Continued from page **47**

The MBE's travelled extensively throughout the system particularly before the introduction of air-conditioning to the country daylight services. The reduced need for first class sitting accommodation in recent years has allowed MBE's to be converted for various special service uses and considerable modelling potential is thus provided. (Articles on converting the Lima MBE model will appear in future issues of AMRM.) 4 MBE's remain in service at the present time.

Whilst the MBE's probably appeared in varnish finish for a time, the tuscan red colour scheme with cream lining would have predominated. The model again represents the 1950's period being fitted with crown lights and the tuscan paint scheme. The model is to the same superb standard as the TAM and previous comments again apply. An amended roof vent layout has meant a separate roof moulding has been produced to that used on the TAM and of course new side mouldings have been made.

The MBE should prove to be a most useful model because of its conversion potential and I know many modellers are eagerly awaiting its arrival. Together with the TAM, modellers now have the basics to run appropriate passenger consists spanning the steam and early diesel era of the N.S.W.G.R. and Australian prototype modelling must surely benefit.

Graham Ahern

WHERE HAVE ALL THE BRAKE VANS GONE? — 2

In recent times, the ACT Division of the Australian Railway Historical Society has acquired several examples of NSWGR passenger brake vans. These comprise EHO vans 1752, 1941 and 1987, as well as ETP 1480. In addition, the Society possesses composite passenger brake van HCX 632.

Paul Rogers.

Due to the lack of space a number of REVIEWS have been held over to next issue.

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6546	Four Poplars	$4.95
6547	Four Birch Trees	$4.95
6548	Four Green Shade Trees	$4.95
6556	Three Poplars	$4.50
6557	Three Birch Trees	$4.50
6558	Three Green Shade Trees	$4.50
6590	Five Pompadours..	$4.95
6596	Two Shade Trees, Two Birch trees, Two Poplars .	$5.95

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BGB SAR 'OB' open wagon body	*ea $5.95*
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BGB VR 'V' or 'VF' van	*$5.95*
TRAX NSW 'LCH' hoppers	*$5.95*
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TRAX NSW 'S' wagon	*$4.95*
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Northyard 10.5mm 10 spoke wheels	*per axle $0.60*

N SCALE

WELCO VR 'AS/BS' coach kit	ea $13.40
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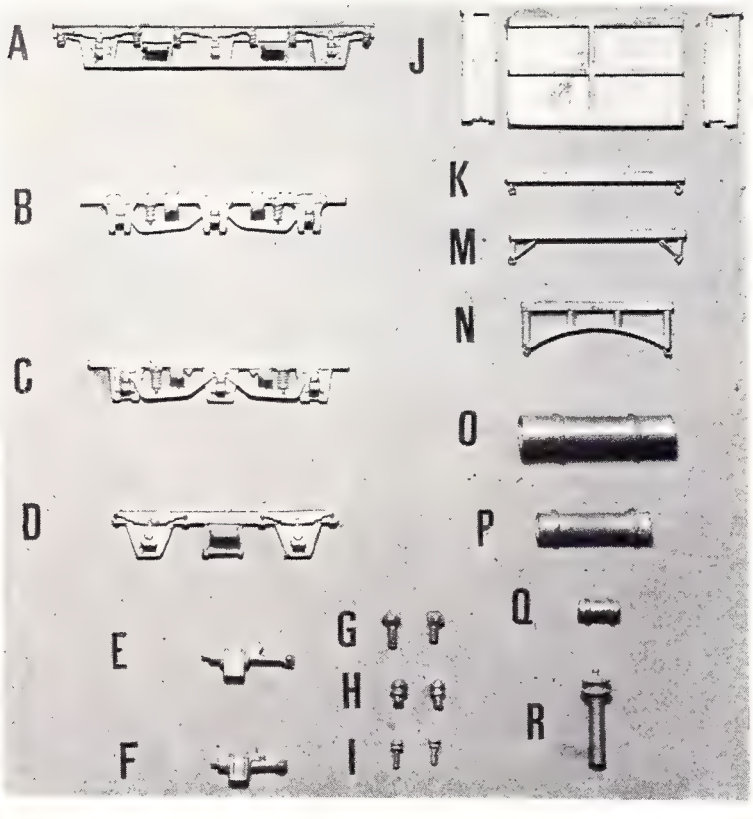

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5062 GWR Bogie Bolster Wagon "A" ... $4.95
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These are all plastic kits that contain finescale detailing to the sides, such as full panelling to the correct depth, bolection mouldings, door handles, stops & hinges, grab irons, roof with lamp tops & vents, ends, floor, solebars, underframes, gas cylinder/s, brake gear, buffers, vacuum pipes, Mansell wheels, glazing & Triang type couplers.

NOTE: For modellers who wish to construct their own type of coach, all the mouldings are available separately. (See AMC list series 'W')

L.M.S. ex-MIDLAND RAILWAY 48ft. CLAYTON NON-CORRIDOR EXPRESS CLERESTORY STOCK
5720 All 3rd, 6 compartment, Lavatory, Luggage $9.95
5722 Composite, 3 1st, 3 3rd, Lavatory $9.95
5723 Brake 3rd, 4 compartment, Lavatory, Guard $9.95

L.M.S. ex-MIDLAND BAIN SUBURBAN STOCK 48ft. LOW ROOF
5710 All 3rd, 8 compartment $9.95
5711 All 1st, 7 compartment $9.95
5713 Brake Third, 6 compartment . .. $9.95
5714 Brake Third, 4 compartment . .. $9.95

L.M.S. (L.N.W.R.) 50ft. CORRIDOR ARC ROOF EXPRESS STOCK

These kits have the same specifications as those above except that brass buffers are supplied. These kits also include dummy corridor connections.

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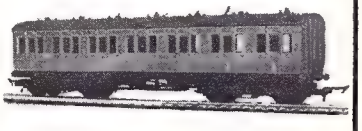
5732 Composite $15.95
5733 Brake Composite $15.95
5734 Brake Third $15.95



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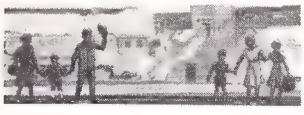

BOX 818

Application Example for BOX 2325

●HO/OO REGULAR BOXED SETS

* 800 Six Railway Refreshment Room Staff
* 806 Six Ladies with bags, walking
* 818 Two groups of three walking
* 853 Six Ladies individually seated
* 867 Three groups of two seated
* 870 Six Workmen with picks shovels etc.
* 876 Six Gangers, four with sleepers
* 889 Blacksmith with helper & horses
* 896 Farm Workers - six figures various poses
*1008A Three Mounted Horsewomen
*1008B Three Mounted Horsemen
*2180 Five walking: men, women & children
*2191 Seven Children walking to school
*2234 Six Transport Workers with crates
*2240 Six Different Transport Workers
*2258 Six Trades People - butcher, baker etc.
*2264 Four Garbos, cans, brooms, barrow etc.
*2268 Six Loco Drivers & Firemen
*2292 Three Groups of two climbing stairs
*2295 Six People going down stairs
*2319 Washing Day - lady hanging washing on line, lady with basket, 2 children & baby, line of washing
*2325 Six Service Station Attendants
*2343 Six Tradesmen - carpenter, builders etc.

** ** ** ** ** ** ** ** **

Sets marked * also available in N

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Set has 18 holes, 6 players, a shed etc.
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Most numbers in the HO/OO group are priced at $3.25 but some are a little higher whilst there are special boxes such as the Mini-golf which are higher still.
** ** ** ** ** ** **

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E-4 Miscellaneous Electrical Lines
M-7 Merten HO & N Figures & Animals
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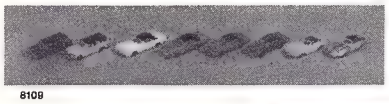

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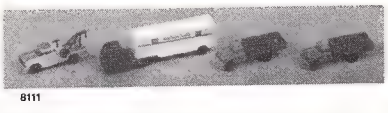

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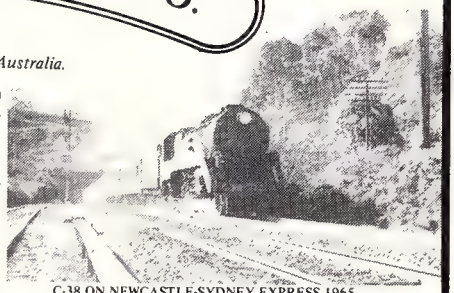

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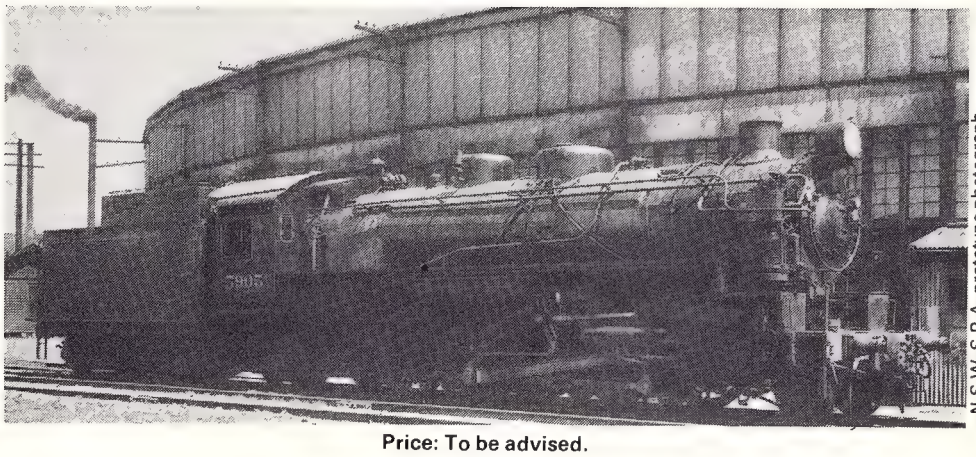

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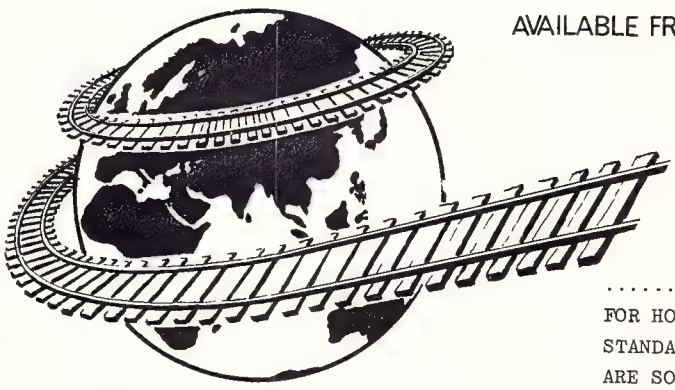

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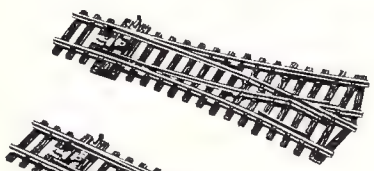

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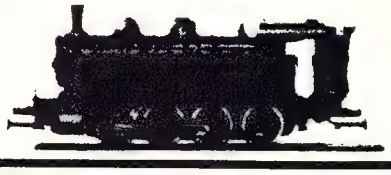

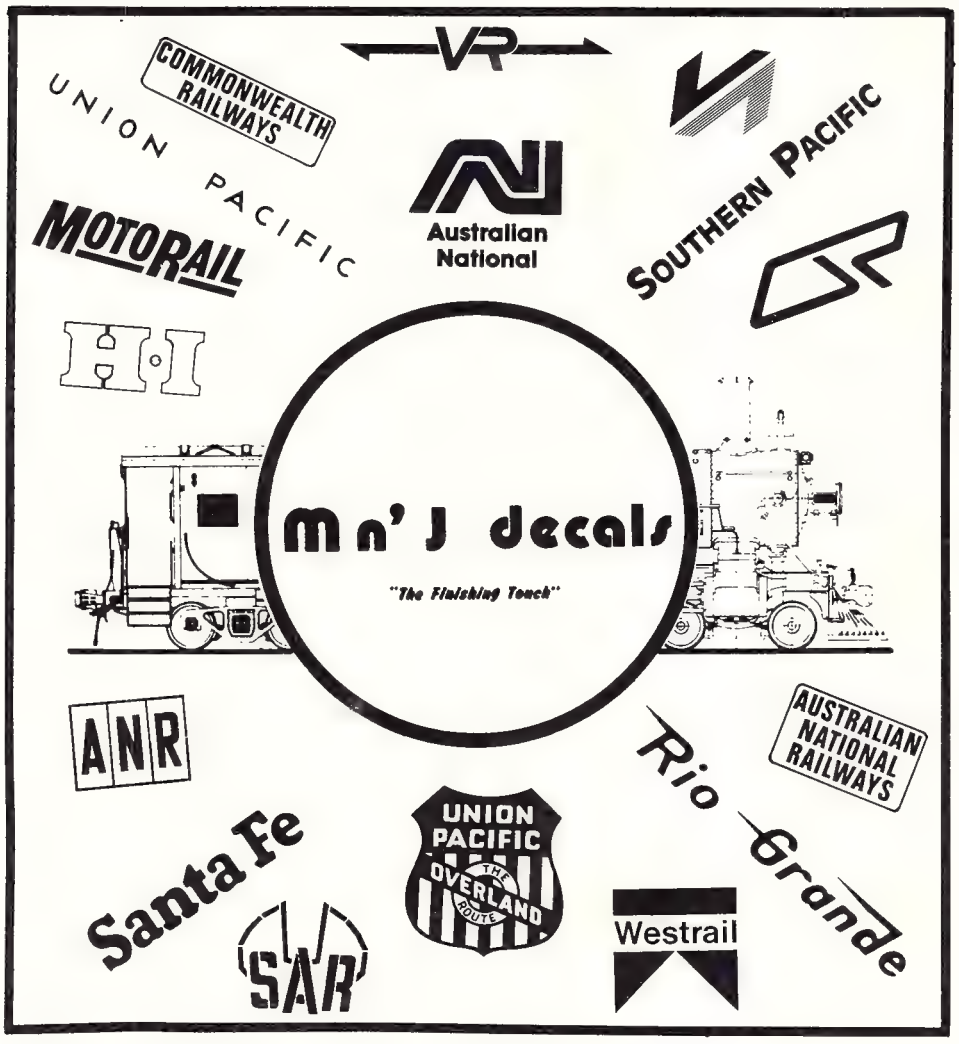

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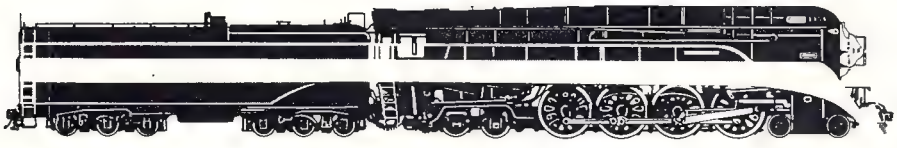

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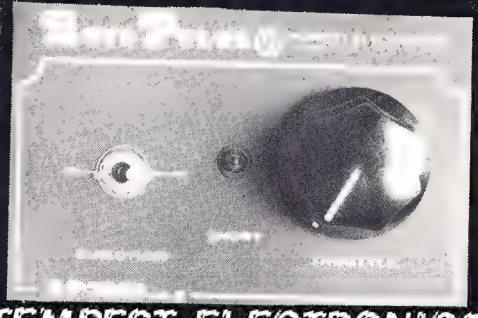

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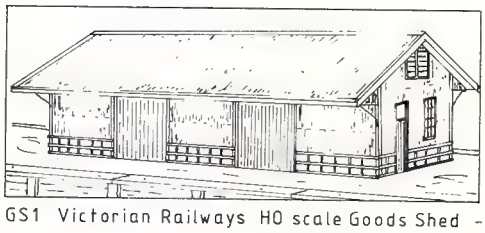

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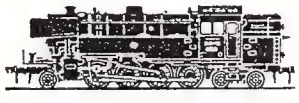

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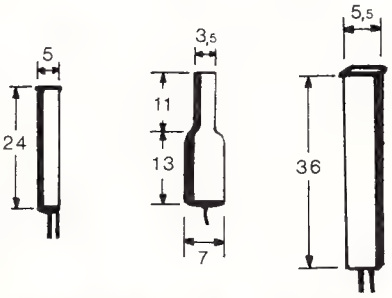

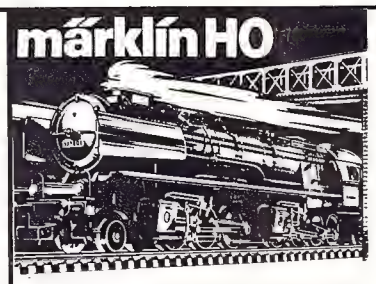

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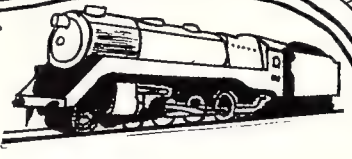

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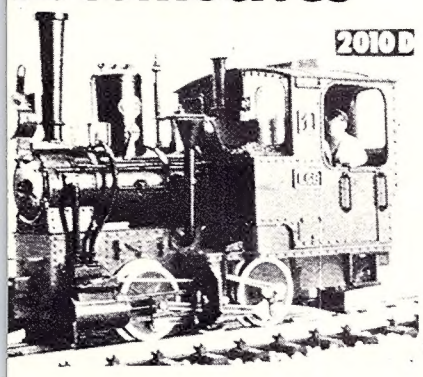

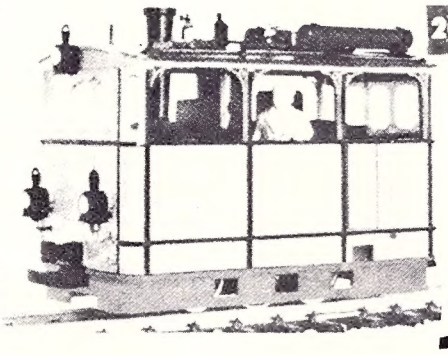

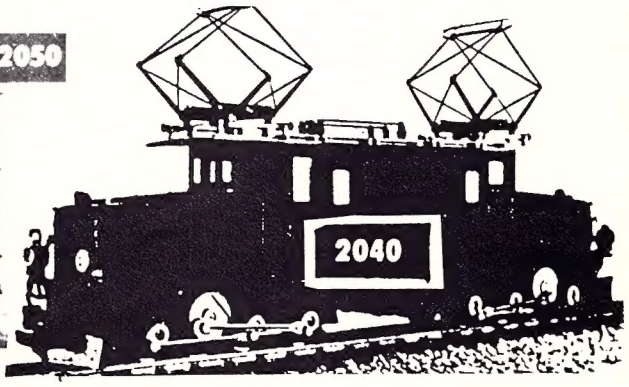

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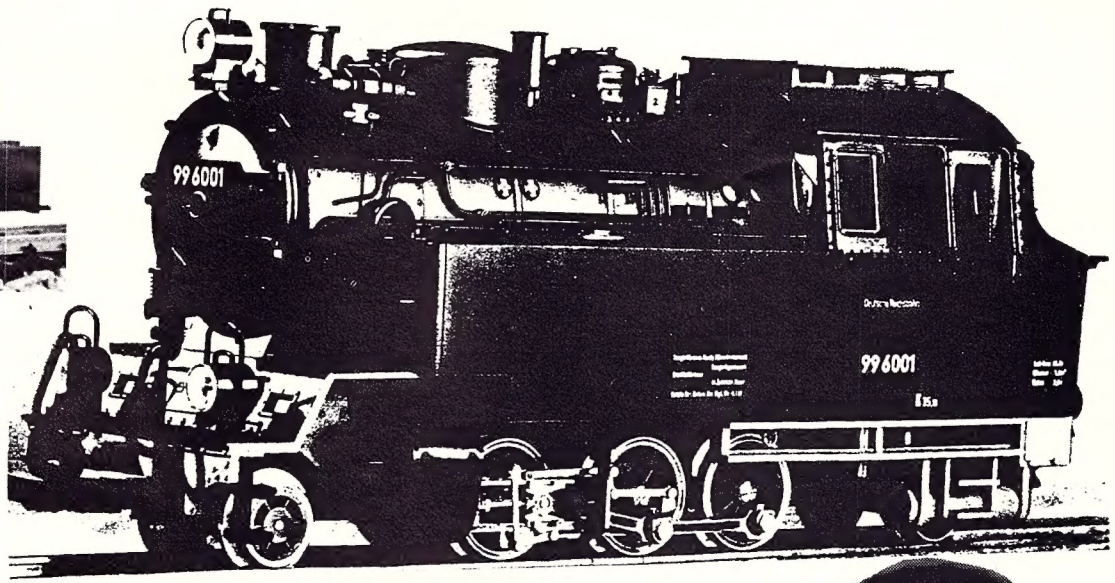

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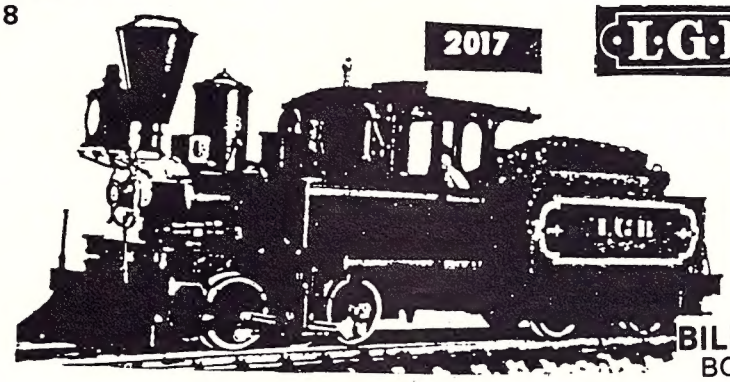

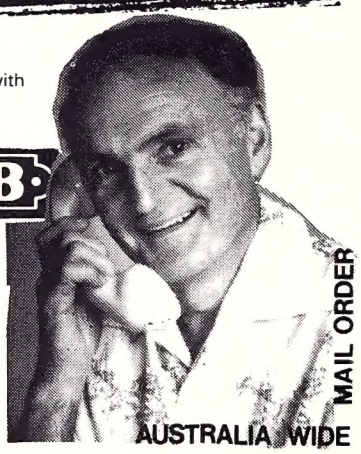

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CORRECTION

Last issue, the SAR/ANR 700 class diesel plan was incorrectly credited to P. Kidcaff. The plan was traced and detailed to a SAR/ANR 700 class by Paul from an original (NSWR 442) plan which had been drawn by Howard Smith. AMRM regrets any embarrassment incurred by the oversight.
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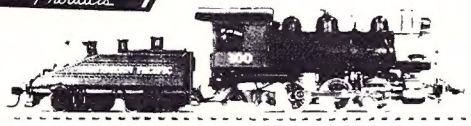

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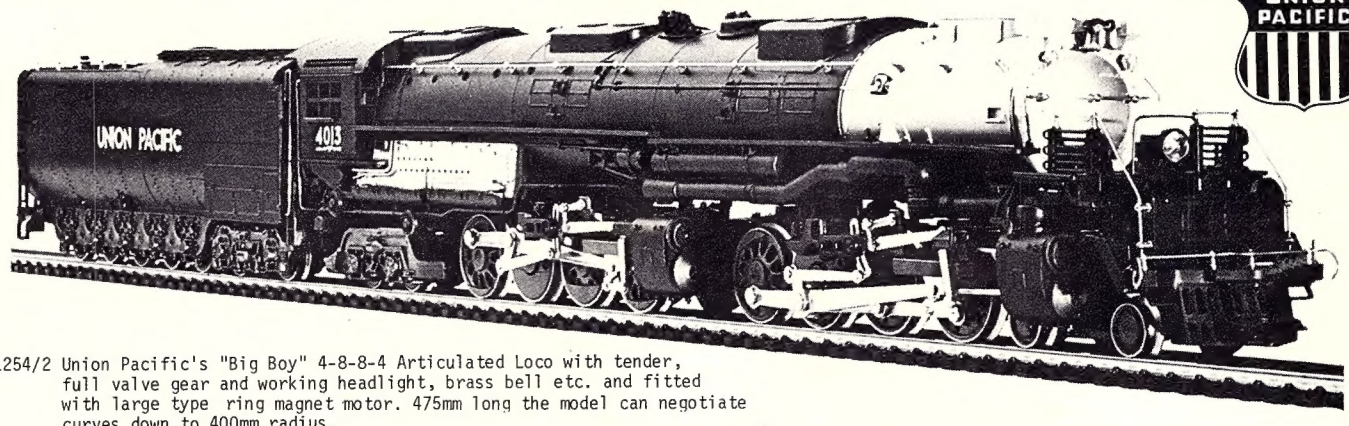


1254/2 Union Pacific's "Big Boy" 4-8-8-4 Articulated Loco with tender, full valve gear and working headlight, brass bell etc. and fitted with large type ring magnet motor. 475mm long the model can negotiate curves down to 400mm radius.

Priced at $199.95

RIVAROSSI

HO/00

SOME OTHER RIVAROSSI LOCOMOTIVES

OLD TIMERS

1206 "American" 4-4-0 type Loco - Santa Fe .. $75.00

1211 "Reno" 4-4-0 Loco of the Virginia and Truckee Railroad $65.00

1212 "Genoa" 4-4-0 Loco of the Virginia and Truckee Railroad $75.00

MODERN STEAM TYPES

HUDSON LOCOS

1252 New York Central - Black $99.95

1273 New York Central - Steamliner $99.95

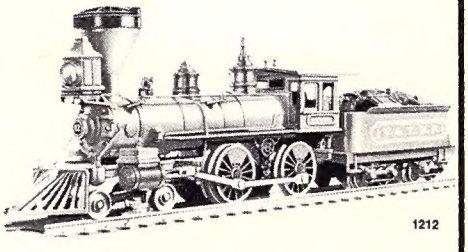
1279 Chesapeake & Ohio - Black $99.95

PACIFIC LOCOS

1283 Santa Fe - Black $99.95

1285 Crescent Limited - Southern - Green . .. $99.95

1530 Alton Limited - Maroon & Red $125.00



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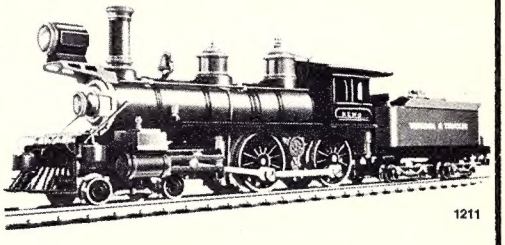

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TO ALL RETAILERS: The prices set out or referred to herein are recommended prices only and there is no obligation to comply with the recommendation.

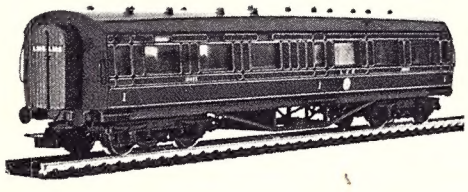
OLD TIMER END PLATFORM COACHES

2992 Baggage Car - Virginia & Truckee .. .. .. Each $10.75

2993 Combine - Virginia & Truckee .. .. Each $10.75

2994 Coach - Virginia & Truckee .. .. Each $10.75

2610 Coach - Santa Fe .. .. Each $10.75



COACH SET WITH ADDITIONS

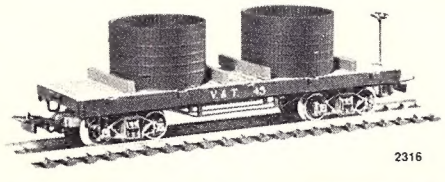
2937 L.M.S. "Royal Scot" set of four coaches Set $150.00

2933 L.M.S. 1st Class Coach No. 15933 to fill out train .. .. Each $37.50

2934 L.M.S. Brake/Third to match "Royal Scot" " $37.50

SINGLE COACH

2634 Roomette to match Santa Fe "Super Chief" may be used to fill out train in Set No. 2678 .. .. .. $12.50



2316

GONDOLAS .. .. Each $8.95

2250 Union Pacific 2254 Boston & Maine

FLAT CARS .. .. Each $7.95

2255 Union Pacific

STOCK CARS . .. . Each $12.50

2259 Santa Fe - green

HOPPER CARS .. .. Each $8.95

2306 SOO Line

CABOOSE . .. . Each $12.50

2307 Norfolk & Western

OLD TIMERS

FLAT CARS .. .. Each $7.50

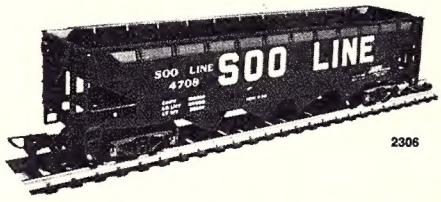
2316 Virginia & Truckee - with tanks

LOG BUGGIES .. .. Each $8.95

2349 With logs

ROLLING STOCK KITS

- BOX CARS 12211 Minneapolis & St Louis .. Each $7.25
- HOPPERS 12260 Peabody Coal Co.



2306

** ** ** ** ** ** ** ** ** ** ** ** **

Prices on Rivarossi lines are holding at the present time but rises in the order of 10% to 15% can be expected later in the year.

** ** ** ** ** ** ** ** ** ** ** ** **

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